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Journal of

NORTH QUEENSLAND NATURALISTS CLUB

Founder, Presd. The late Dr. HUGO FLECKER.

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OBJECTS—The futherance of the study of the various branches of Natural History and the preservation of our heritage of indigenous fauna and flora.

ADDRESS — Box 991, P.O. CAIRNS.
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MEETINGS—Second Tuesday of each month at Oddfellows Hall, Lake Street, 8 p.m.

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CONTENTS

Unusual Bower of the Toothbill Bower-Bird........................ Page 2.
New Guinea Holiday .... Page 4.
Dominant Native Trees Distribution in N. Q. .... Page 5.
The Agile Wallaby .... Page 7.
Snake Catching .... Page 8.

EDITOR'S NOTE — Lateness of this issue is regretted. Please send more contributions or next issue will be later!

"Each Author is responsible for the opinions and facts expressed in his or her article"

UNUSUAL BOWER OF THE TOOTHBILL BOWER-BIRD,

Scenopoeetes dentirostris

Many field observations have been published in past years regarding the habits and song of the Toothbill Bower-bird (native name "cherra-chelbo") and considerable doubt still exists whether or not it is a true mimic of the song of birds which frequent the areas of rain forest from approximately Cooktown in the north to a little south of Townsville, Queensland. Many well known ornithologists have contributed interesting data to various journals, including Syd. Jackson 1908, Sharp brothers 1908, Bertram Green 1909, P. A. Bourke 1947. Others include A. H. Chisholm O.B.E., Norman Chaffer and Dr. John Warham, all of whom have had considerable field experience of this interesting Bower-bird.

However, it is an unusual bower constructed above the usual display area that I wish to record. As far as I am aware this type of structure has not been reported previous to its discovery on October 14, 1956 by my son and myself, in an area of rain forest 2½ miles north-west of Lake Barrine, in the shire of Atherton, Queensland.

Habitat: An isolated area of rain forest comprising some 230 acres in broken undulating terrain of metamorphic origin, the forest margins containing many large trees of **Acacia** sp. known locally as black wattle. Most of the commercial trees had been removed some years previously and the area had then been left undisturbed, thus becoming a haven for rain forest birds. I always found it an extremely good area for the study of wild life, and especially the Toothbill Bower-bird.

Bower Site: Situated on the crest of a steep ridge, not far from a small clearing and close to an old snigging track, the site was in a more open situation than is usual for the Toothbill, who tends to avoid sunlight.

The ridge was approximately ¾ of a mile long and about half a chain wide, both sides very steep and dense and only accessible with difficulty. My son and I were observing a rather good display area and a bird with an excellent range of mimetic song, when we noticed something unusual about the area above the display area. We then made a detailed survey of the ridge which contained eight different playgrounds, all except this one being of the usual type. We took details of this unusual bower and a brief description follows:

Description of Bower: Two thin vines from a rain forest tree ran at an angle of 45° and through a dense shrub about six feet from ground level, the ends of both vines reaching the ground, and were held in position by two bent sticks each of which was pushed into the loose soil and debris raked over the portion of the vines on the ground. This gave the bower added strength and stability. The vines which on their way to the ground ran through the dense foliage of the shrub, were held in position by four sticks 3 feet in length and about ½ an inch in diameter, which kept the structure in a bent position to within about eight inches from the ground. More or less evenly spaced, these 3 feet long sticks were placed in a horizontal position and were interlaced under and over both vines. Numerous smaller sticks and twigs were also interlaced and with the assistance of the larger sticks gave the bower a lean-to shape, and it was quite a substantial structure. Three forked upright sticks suitably spaced and pushed into the loose soil assisted to take some weight off the bower.

Directly below the structure was the usual display area, swept clean of old debris and containing more than forty wild tobacco leaves, some being over 18 inches long. In the centre of the display area was a dark patch of masticated berry pulp residue, two dark blue and two brown berries. Around the edge of the display area were several forked sticks newly trimmed by the bird and ready for use, presumably, in the structure above. One large white toadstool with the stem pointing to the sky was an attraction near the centre of the display area or "circus ring".

NATIONAL MUSEUM 5 AUG 1974 OF VICTORIA

On the day when it was first found, an attempt was made with an old type camera to photograph the unusual structure but only one exposure could be made. Next day, October 15, 1956, with new battery and bulbs, four exposures were made. One of these was forwarded to A. H. Chisholm O.B.E. of Sydney who, with K. A. Hindwood, checked the picture which was not very satisfactory, but the main details were evident.

The bower was kept under observation for four weekends running.

On December 16, 1956, two violent storms buffeted the area and as expected the structure was seriously damaged. However, it was in the process of being rebuilt and was taking the shape of the previous bower. This time, however, the long interlaced sticks near the top were at least 4 feet in length but much thinner. Some interlacing of smaller sticks had occurred and pegging of the upright sticks also. On two occasions a Toothbill was observed to carry sticks to below the bower and it was noted the sticks were very dry and light and had been trimmed to the bird's requirements by the bill which is adapted for this purpose.

25 December, 1956: Bird still in occupation and very vocal; no change in the structure.

20 January, 1957: No change in the bower since it was rebuilt after December 16 although the bird was in attendance near the bower. Leaves in the display area had wilted badly but some new berry pulp was in the centre of the display area. Bird not very vocal and range of voice had considerable decreased.

26 February, 1957: No change except one long thin stick was placed on top of the bower. Birds now silent and not observed.

21 April, 1957: Birds not seen or heard. The bower had successfully survived the heavy wet and windy monsoon season. Display area under the bower covered in debris.

June, July, August, 1957: No change and no birds observed.

29 September, 1957: Return of Toothbills to the ridge and display areas. No work attempted on bower structure; the display area below was cleared and some leaves placed on the ground with a bird in attendance.

30 December, 1957: No work on bower: display area below occupied by a bird who was very vocal.

In 1958 ponding of the first section of the Tinaroo Dam commenced and the area of the unusual bower was flattened by a dozer to make a loading ramp for the removal of some valuable cabinet timber before it was inundated. This caused the birds to move further away and we were unable to obtain any more data of this unusual Bower-bird and its unique structure. For over seventeen years a casual check has been made on areas frequented by the Stagemaker, without any success in locating a bower of the type described.

It is possible that the bird with the unusual lean-to type of bower and perhaps other birds have acquired through evolution some knowledge of using sticks as bower material and so are able to construct a crude type of bower somewhat different from the usual one on the ground, which has leaves, berries and other material used for display and sex stimulation.

J. A. Bravery,
Box 178, Atherton, Q. 4883

NEW GUINEA HOLIDAY

One night up at Wau I stayed up all night at Peter Shanahan's collecting light. He supplied me with an easy chair and a couple of blankets. The night was dark, the stars brilliant. Below the house a stream roared and swirled unceasingly.

Hawk moths, fourteen different varieties, hurtled in. The usual large, black with white stripe day flying moths came in, up to sixteen of them on the sheet at one time. I captured twelve different ground beetles, and was bruised on the cheek by a large rhinoceros beetle. It was amusing to see the rhinoceros beetles landing on the sheet. Once on, they trundled slowly ahead, walking over hawk moth wings and bodies, disappearing under the huge wings of the day flying moth and forging through the myriad small moths, completely unconcerned at the thrashing wings that slapped their faces. They resembled tanks and many had smal moths and beetles on their backs like warriors riding their chargers into battle.

Around midnight, hercules moths, all males, came swooping and gliding in. At first I thought they were birds or bats until one landed on the grass at my feet, with long tails streaming from his wings. Soon there were eight hercules on the sheet, grass and nearby plants. Later, at about 3 o'clock, a shadowy shape sped in from behind me, there was a soft "thwack!" and one of the moths was snatched from the sheet. It gave me the fright of my life! The next time I was ready and saw that it was an owl. He came in eight times, sweeping past me to snatch a victim from the sheet and turning with beating wings to return to a branch over the swimming pool. By the droppings it seemed he had been doing this for many nights, for the light was on every night – an easy way for him to get a meal. At 6 a.m. the Pakistani with whom I stayed, and who was interested in ticks and mites, came and took me home.

My last weekend in New Guinea, three Canadian friends and I went out past Hobu, along the usual rough road, across wooden bridges spanning rushing rapid-riven streams and up steep hills clothed in dense jungle.

We stopped first at a huge tree that had crashed, its branches shattering in all directions. Searching its immense length we found some huge cases of longicorn beetles, but could find none alive. Apparently a possum or bandicoot had recently had a great feast for the remains of at least twenty beetles were scattered about. I found some very long-legged weevils that pranced around over the bark. Underneath I saw a gorgeous ground beetle with sky blue head, red thorax and azure wingcases – I was actually trembling with excitement trying to catch it.

Further on Joan swung her net at a small butterfly and found she had caught an irridescent blue jewel. Pamela caught a minute butterfly of soft pastel lavender. Red lacewings were particularly abundant and the black and yellow birdwings, and an occasional green and black birdwing, winged swiftly up the road. The flashing dashes of a butterfly that resembled the oak blue were seen, while small delicate yellow butterflies with black edgings slipped at the side of a muddy pool.

Past native gardens and tall banana trees, we came to a silver mountain stream, which was an absolute haven for kingfishers. While I was bathing my feet, I noticed the largest kingfisher that I saw in New Guinea sitting quietly on an overhead branch. He was indigo blue, with salmon pink throat and white breast and his red bill was like a stop signal. One of the prettiest was the dwarf kingfisher, 4½ inches long, with the upper parts blue-black, the crown and parts of the wings shiny blue, and a paler blue band down the back to the rump; with the under parts ranging from bright orange to gold, and with orange legs. I saw here for the first time the European kingfisher, which in New Guinea is called the River Kingfisher. The Little Kingfisher in his colourful blues, and the Azure Kingfisher with his azure blue back and deep orange under parts, flashed up and down the stream.

As I followed the stream, turning over rocks and disturbing small frogs, I came upon an excited mob of small birds badgering a large owl that clicked its beak in annoyance, amber eyes glaring. The owl was a thick set bird about 20 inches in length, clothed in greys and browns, and had a checkered breast.

Just before we turned for home we came to some abandoned gardens. Mooching through shredded bark I caught two small ground beetles of radiant green, the wingcases shot through with red filaments. Under some logs I caught very small ground beetles with large pop–eyes. The head and thorax of these were bronzy green and the wingcases black with yellow markings. We also found some soft winged longicorns, brown in colour. I had previously caught one up at Wau when it came in to a light.

The surprises of my last collecting trip were not over. Coming back to the bridge at Hobu, Rod suddenly yelled, "Bird of Paradise!" He had seen it fly across the road ahead to a tree at the side of the road. There hanging from a vine was a Red Bird of Paradise. Through binoculars I noted his yellow head and back, his lacy reddish orange tail which fell like a lyre-bird's tail feathers, and the feathers on his sides like a duster, a delicate tracery of red and orange. He was playing on the vine, hopping and twisting, his long feathers shaking silkily; one moment he was hanging upside down, the next flapping energetically higher. This went on for some time. Then, uttering a harsh cry that spoilt the effect of his blazing beauty, he flew back across the road like a flaming banner and disappeared into the towering treetops. All the way to the bridge we could hear him calling.

John Crowhurst, Cairns.

DOMINANT NATIVE TREES – DISTRIBUTION IN N.Q.

The following is a brief selection of the native trees of North Queensland. In fact hundreds of species could be listed over dozens of different localities, but this simple list may give the enthusiast a basis to work from. Names given are those used in the timber trade, with some local names added in brackets, followed by the presently accepted botanical names and some synonymous names now superceded.

COASTAL REGION: (Within 20 mile radius of Cairns)

This area can be divided into three main types of woodland.

1. **Littoral Forests:** These include both the mangrove areas and the flood plain swamps adjacent to and confluent with the mangroves. The dominant species are:

Mangroves – many species including Aegiceras majus. Avicennia marina. Bruguiera gymnorrhiza, Exocoecaria agallocha, Xylocarpus granatum.
Tea Tree – Melaleuca leucadendron.
Coast Cottonwood – Hibiscus tiliaceus.

Kapok – Bombax ceiba, formerly B. malibaricus.
Cheesewood (Leichhardt) – Nauclea orientalis.
White Cheesewood (Milky Pine) – Alstonia scholaris.
Corkwood – Carallia brachiata.
Evodia (Corkwood, Parrotwood) – Euodia elleryana, formerly Evodia elleryana
Red Beech – Dillenia alata, syn. Wormia alata.
Water Gum – Eugenia tierneyana.
Cedar Plum (Tar Tree) – Semecarpus australiensis.
Swamp Box – Tristania suaveolens.
Yellow Penda (Sour Hardwood) – Tristania pachysperma.
Damson – Terminalia sericocarpa.
Almond (Sea Almond, Indian Almond, Fiji Almond) – Terminalia catappa.
Beach Calophyllum (Ball Nut) – Calophyllum inophyllum.
numerous Palms, including Cabbage Palm – Livistona australis.

2. **Coastal Forests:** These cover a fairly large area extending from the edges of the flood plains to the foothills and in places well up the mountain sides, where the merging with the rain forest can be clearly seen by the distinct colour change from the blue-green of the open forest to the dense dark green of the tropical "scrub". A very good example of this type of forest is seen along the Captain Cook Highway. Dominant species are:

Red Mahogany – Eucalyptus resinifera and E. pellita.
White Mahogany – E. acmenioides. Red Bloodwood – E. intermedia.
Carbeen (Moreton Bay Ash) – E. tessellaris. Tropical Gum – E. papuana.
Molloy Red Box – E. leptophleba. Forest Red Gum – E. tereticornis.
Poplar Gum – E. platyphylla, formerly E. alba.
Tea Tree – Melaleuca leucadendron.
Brown Salwood (Black Sally, Black Wattle) – Acacia aulacocarpa.
She Oak – Casuarina equisitifolia var. incana (beach): C. cunninghamii (river); C. torulosa "(baker's wood)".

Turpentine – Syncarpia glomulifera.
Swamp Box – Tristania suaveolens.

3. **Rain Forests:** (Jungle or Scrub). These cover areas extending in places from the beach front and the flood plains to the mountain tops. They are densely covered areas with a fascinating number of species of trees, shrubs, woody climbers, vines, palms, etc. The variations in rainfall, soil types and altitude make for constant changes in dominant species, but broadly speaking these would include:

White Cheesewood (Milky Pine) – Alstonia scholaris.
Spur Mahogany (Spurwood) – Dysoxylum pettigrewianum.
Cedar Plum (Tar Tree) – Semecarpus australiensis.
Silver Quandong – Elaeocarpus grandis.
Yellow Walnut – Beilschmiedia bancroftii.
Queensland Walnut – Endiandra palmerstonii.
Hickory Ash – Flindersia ifflaiana. Silver Ash – F. bourjotiana.
Queensland Maple F. brayleyana. Maple Silkwood – F. pimenteliana.
Red Silkwood (Pencil Cedar) Palaquium galactoxylum.
Bolly Silkwood (Tarzali Silkwood) Cryptocarya oblata.
Briar Silky Oak (Briar Oak, White Oak) Musgravea heterophylla.
Northern Silky Oak (Bull Oak) Cardwellia sublimis.
Red Tulip Oak (Red Crowsfoot) Argyrodendron peralatum.
Cassowary Satin Ash (Cassowary Gum) Acmena graveolens.
Canary Beech (China Pine) Polyalthia nitidissima.
Black Penda Xanthostemon chrysanthus. Red Penda X. whitei.
Black Bean Castanospermum australe.

Hard Leichhardt Neo-nauclea sp.
Damson (Sovereign Wood) Terminalia sericocarpa.
Candlenut – Aleurites moluccana.

Some Trees of the **ATHERTON TABLELANDS** will appear in next issue.

References: Queensland Forestry Dept. Pamphlets 1 and 5.
A Card Key to the Rain Forest trees of North Queensland.
by B.P.M. Hyland.

John P. Martin.

THE AGILE WALLABY

The Agile or sandy wallaby **(Wallabia agilis Gould)** to most people in North Queensland, is a familiar animal inhabiting the open forests and adjacent grasslands of the coastal lowlands. This in fact is the usual habitat of the species, however it may also be encountered in suitable habitats further inland. This is usually evidenced by road kills particularly along the road between Kuranda and Mareeba.

The face of the agile wallaby is sharply pointed, and this feature together with the general body colouring and the partly hairy muzzle, serves to distinguish it from all other wallabies.

Distribution

The agile wallaby occurs commonly throughout coastal nothern Australia and New Guinea. On the Queensland mainland, it is found abundantly in coastal districts north of the Tropic of Capricorn; populations also occur on some of the islands of Moreton Bay in South Queensland, including Stradbroke and Peel.

Dr. Tom Kirkpatrick of the Fauna Conservation Branch of the Department of Primary Industries, in recent years, has conducted studies on the biology of the "agile" and the following information has been acquired as a result of these studies.

Breeding

Breeding occurs throughout the year. Both males and females reach sexual maturity at the age of approximately 1 year, and under normal conditions a female may give birth to one young every 7 months. The time from mating to birth, provided no young is in the pouch, ranges from 29 to 33 days. As in the red kangaroo, birth is followed immediately by mating and the resulting embryo ceases development at an early stage. This "delayed" or "quiescent" embryo resumes development if the first young is lost from the pouch and birth occurs some 27 days after loss. If loss does not occur, development recommences in time for the quiescent embryo to be born when the first young is 7 months old and ready to be evicted from the pouch.

General Notes

The agile wallaby tends to be gregarious with small groups, particularly of females, sharing the same resting and feeding places. Unlike the large kangaroos, however, the young, after vacating the pouch quickly become independant of their mothers and the groups are not necessarily of related animals.

The potential life-span is about 10 years, with few reaching that age in the field.

REFERENCE

Kirkpatrick, T. H. (1970) "The Agile Wallaby in Queensland" (Queensland Agricultural Journal, March 1970)

C. M. Weaver.

SNAKE CATCHING

After finally obtaining my driver's licence and getting the car registered, my younger brother and I decided to go out on a few snake catching trips. On Monday morning it was raining miserably and we thought the snakes would be under the old iron and rubbish. When we checked our favourite spot at East Stratford, we found that yellow faced whip snakes (Demansia p. psammoph and common fresh water snakes (Natrix mairii) were abundant. We managed to collect six of the former and four of the latter.

At a second spot in East Stratford, Michael noticed a four foot long Herbert River snake (Stegnotus modestus) in an old well partly filled with water. It could not get out as the water level was too low and the concrete walls too smooth. After catching him, we caught a common fresh water snake under some tin near by. We then checked an old building and found a brown tree snake (Boiga fusca) sitting on the rafters. Later, at different areas in East Stratford, we collected another three yellow faced whip snakes and three common fresh water snakes.

Behind the cemetery the next morning we caught an unusually coloured small eyed snake (Denisonis pallidiceps), which was all black, and a large common fresh water snake.

Later that day, we and a few friends drove out to the area around Crystal Cascades. In an old shed out there we found three brown tree snakes sitting in the rafters in different places. With considerable trouble we reached some old cane barracks, where nothing was found in two sheds except the cast skin of, possibly, a small eyed snake. While walking to the third shed, Michael captured a nice carpet snake (Morelia spilotes variegata), five feet long, coiled up in the grass.

In the third shed our luck continued. Under a table we found a children's python (Liasis childreni). Derek saw another children's python in the rafters which was quickly captured. Dennis noticed a third children's python in a different room, sitting in the rafters.. While capturing it, we found another one with it but partly concealed by the iron roof. We then foun a brown tree snake on a shelf in the building.

Some of these snakes will be kept for either our collection or our friends' collection. The others will be released in special areas where we hope to get them breeding.

Dennis and Michael Anderson,
Stratford.

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CONTENTS

The State of Our Club.. .. .. Page 2
Visitors to the Nectar Bowls .. .. Page 3
Dominant Native Trees (continued) . .. .. Page 4
Kuranda Range (Field Day Notes) .. .. .. Page 5
Banana Fancier .. .. Page 7
Cairns Shelling . .. . Page 7
Dragonfly & Robberfly .. .. Page 8

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The State of Our Club

At the Annual Meeting on 10 September 1974, retiring President Bill Huddy reported that the Club had reached a somewhat low ebb. Average meeting attendance had dropped from the previous year to 19.5 members - an uncomfortable figure, we all agree! - and six visitors. During the year the Treasurer gave much time in organising two raffles. However raffles were not the answer to the financial shortage as members would become tired of selling tickets, while to raise fees might increase income but cause membership to fall off.

The Committee had tried to arrange interesting features for each meeting . These included: slides of botanical interest, Melbourne Gardens - J. Van Grieken; movie film of Ayers Rock - W. Felton; "Role of Fauna Officer, D.P.I." - Mark Weaver; mainly birds - Len Robinson; small fauna - Clyde Coleman; "Oil Spillage, Great Barrier Reef" - Joan Wright; visit by Club to Marine Garden.

Field day venues had been varied, and so had the weather: Danbulla (damp); Mareeba-Mt.Molloy (deluged) ; Herberton (weather fair but area sodden); Kuranda, Davies Creek, Speewah, Pine Creek, Black Mountain (beautiful days).

The fairly large amount of mail handled by our Secretary included many queries on bird life from intending overseas and interstate visitors, overseas butterfly exchanges, a snake inquiry from Western Australia, and matters such as turtle farming, protection of reptiles, etc.

While a note of foreboding is clear in this Annual Report, it is also clear that our Club still does have a role to play in "The furtherance of the study of the various branches of Natural History and the preservation of our heritage of indigenous fauna and flora" - as our Founder President stated (a trifle wordily) in 1933.

In future the monthly meeting will be spared the reading of minutes and other merely formal procedures. The guest speaker or film of the evening will be presented first, allowing time for questions and discussion. Then, after a cup of tea , specimens and nature notes will be discussed. With this assurance it is hoped that members will be encouraged to bring along more visitors, who will return and become members.

Incoming President Jack Cassels appeals especially for members with specialised knowledge of botany, geology, mammology or whatever, to attend field days and meetings when they can, to share their knowledge with others. Only if membership increases and members participate as fully as possible, can our Club continue to function.

Your Editor adds further that more contributions are essential if the Journal is to continue to be published in its present form. The "North Queensland Naturalist" does serve, we believe, to maintain contact with all members and exchange groups in as informatively enjoyable way as possible. By publishing the authentic observations of amateur naturalists together with those of scientifically trained experts in various fields, a useful amalgam is hopefully provided.

Do you like it this way? ______________________________

Visitors to the Nectar Bowls

A few months ago I started to put out sweetened water in bowls in the Callistemon and Cadargi trees in my garden. The first bird to take advantage of these was the Yellow Honeyeater. Once he had found it he was rapidly joined by the Helmeted Friar Bird, Dusky Honeyeater and Graceful Honeyeater with the Yellow Breasted Sunbird visiting now and again.

After a few days the Rainbow Lorikeets found the bowls. The first day only two came along - then by the end of the day there was about half a dozen. By the end of the second day there were twenty or more flocking greedily down.

The moment I went out to the trees to refill the bowls, the birds were on the alert and as soon as I had left, they flew down to drink. One day my husband went out and filled the bowls, came back to the verandah but the Lorikeets ignored the whole thing. I just walked out to the tree, turned round and came back. Immediately they flocked down. I tried this several times and each time they came down for me even though I did not refill the bowls but would not come when my husband went out and filled them.

Trying to make it easier for the birds to perch, my husband nailed a piece of red plastic hose to the tree. The Friar birds took to it straight away with no trouble, but when the Lorikeets arrived, they eyed it with suspicion - possibly thinking it was a snake - and it was several days before they would use it.

As the larger birds were hogging the bowls, we tried to help the smaller fellows by putting a piece of chicken wire in the tree and then wedging four small necked pill bottles into the holes. The bigger birds took over these as well, so we put lids with holes in them on two of the bottles. It didn't work as the Lorikeets and Friar Birds took them over just the same. The birds could get their tongues in so far but there was always a little left at the bottom. I would often find one of the bottles capless or pulled out of the wire and one day as I watched, a Lorikeet perched on the wire and with his beak and foot pulled up the bottle out of the wire, tipped it on one side and as the water trickled down the side, happily licked it up.

I have noticed that when the Friar Birds and Lorikeets are in the tree together, it is the Lorikeet who is top dog. The Friar has no chance to feed until the Lorikeet is finished and not always then. The Lorikeets will sit in the tree, full to overflowing, but woe betide anyone who tries to feed from the bowls - not wanting it for themselves, the Lorikeets will pounce and drive away anyone foolish enough to try for a turn.

The Friar Birds in turn, drive out the Yellow Honeyeaters, who drive out the Dusky and the Gracefuls and the poor little Sunbird is just about the last in the "peck order".

A few days ago I was sitting on the verandah when, without any warning a large ginger cat rushed out from the car port, up the leaning trunk of the Callistemon and grabbed a Lorikeet that was feeding at the bowl. I jumped up with a scream and luckily the cat dropped the bird and fled for its life with me after it. The Lorikeets flew away in a flurry but within half-an-hour were back again. My husband has now made a cat guard on the tree to stop a recurrence of this.

Now the Drongoes have found the bowls and it is nothing to see about five of them in the Cadargi enjoying the sweetness. They sometimes come to the Callistemon but seem to prefer the Cadargi.

Now our latest arrival is a Little Friar Bird. He has been around the bowls a couple of evenings but I have not seen him through the day.

Admittedly sometimes the raucous screech of the Lorikeets at 6.30 a.m. can get a bit trying on the ears, but to the eye it is wonderful to sit on our front verandah and watch the birds feeding in the trees only a few feet away from us. So colourful, so quarrelsome, so noisy but so interesting.

Marion Cassels. Cairns

DOMINANT NATIVE TREES

DISTRIBUTION IN N.Q.

(Continued from previous issue, No. 163)

ATHERTON TABLELANDS:

This area can be divided into two main types of woodland.

1. OPEN FORESTS: These forests extend roughly from west of Kuranda to Walkamin and Tolga, where the Great Dividing Range to the west and the Tinaroo Range to the east are separated by the Barron River and the large lava flows that are the basis of the rich red Atherton Tableland volcanic soils. The open forest persists well up into the Tinaroo Range and along almost the entire length of the Great Dividing Range. The main species are:

Red Bloodwood - Eucalyptus intermedia. Tropical Gum - E.papuana.
Forest Red Gum- E. tereticornis. Molloy Red Box - E. leptophleba.
Cadaga (Cadaghi) - E. torelliana. Rose Gum - E. grandis.
Poplar Gum - E. platyphylla, formerly E. alba.
White Stringybark - E. phaeotricha . Ironbark - E. culleni.
White Mahogany - E. acmenioides. Red Mahogany - E. resinifera.
Swamp Box - Tristania suaveolens.
Turpentine - Syncarpia glomulifera.
She Oak - Casuarina torulosa ("baker's wood"); Cunninghamii (river)

2. RAIN FORESTS: Before settlement took place on the Atherton Tableland, rain forests covered almost the whole of the agricultural and dairying lands, extending to the mountain ranges in the north, east and south where the bulk of this type of forest is found today. Small pockets of rain forest have been preserved, notably Lakes Eacham and Barrine, Tolga, Yungaburra, Malanda and along the Atherton-Ravenshoe road. These remnants of forest enable the enthusiast to envisage just what a magnificent area this must have been once. The dominant species, as in all rain forests in North Queensland, vary considerably with rainfall, soil types and altitude, but one could expect to find such species as:

Kauri Pine - Agathis palmerstonii and A. microstachya.
Red Penda - Xanthostemon whitei.
Red Cedar - Toona australis.
Queensland Walnut - Endiandra palmerstonii.
Yellow Walnut - Beilachmiedia bancroftii.
Queensland Maple - Flindersia brayleyana.
Maple Silkwood - F. pimenteliana. Silver Ash - F. bourjotiana.
Grey Satin Ash (Watergum) - Eugenia gustaviodes.
White Eungella Satin Ash (Yellow Watergum) - Eugenia spp.aff.smithii.
Red Eungella Satin Ash (Red Watergum) - Eugenia spp. aff. smithii.
Kuranda Satin Ash (Cherry Penda) - Eugenia kuranda.
Satin Sycamore (Blood in the Bark) - Ceratopetalum succirubrum.
Silver Quandong - Elaeocarpus grandis.
Rose Alder (Feather Top, Pencil Cedar) - Ackama australiensis.

Rose Butternut (Bolly Gum) - Blepharocarya involucrigera.
Red Tulip Oak (Red Crowsfoot) - Argyrodendron peralatum.
Northern Silky Oak (Bull Oak) - Cardwellia sublimis.
Crater (Grey) Silky Oak - Musgravea stenostachya.
Northern Brush Mahogany (Red Carabeen) - Geissois biagiana.
Northern Sassafras (Sassafras) - Doryphora aromatica.
Magnolia (Pigeonberry Ash) - Galbulimima belgraveana.
Black Bean - Castanospermum australe.
Candlenut - Aleurites moluccana.
Brown Salwood (Black Wattle) - Acacia aulacocarpa.

This article has been kept as concise as possible, while still attempting to convey the vast complexity of the subject.

References: Queensland Forestry Department. Pamphlets 1 and 5.
A Card Key to the Rain Forest Trees of North Queensland, by B. P. M. Hyland.

John P. Martin.

Kuranda Range

12.10.73

(From a Field Day Notebook)

Time: 8.30 a.m. to 3 p.m.

Weather: Fine and partly overcast.

Route: Wright's Lookout south into the rainforest along a track (dry weather road only), down to Surprise Creek; altitude 400 to 500 m.

Habitats: Rainforest, wet Schlerophyll forest, creekbed.

The first half-mile was uphill (northern slope) with rich mountain soil and tropical rainforest, with a great number of birds and butterflies early in the morning.

Plants noted:
Ficus benjaminii - Weeping Fig (or closely related Ficus sp.)
Ginger (seed recently dispersed); Cordyline terminalis;
Grevillea pinnata (leaves light green underneath); Eugenia sp.;
Epipremnum pinnata; Platycerium alcicornium - Elkhorn;
Dianella sp., Ageratum sp. (introduced); Lantana sp. (introduced);
Solanum sp. - Wild Tobacco (introduced); Calamus australis;
Podocarpus elatus - Brown Pine; Brassaia actinophylla - Umbrella Tree;
Pandanus monticola ; Freycinetia sp. (fam.Pandanaceae);
Smilax australis (climber); Pothos longpipes (climber);
Flagellaria indica - Climbing Bamboo; Laportea moroides - Gympy-gympy;
Large clumps of ferns (epiphytes) related to Davallia;
Large treeferns; wild Raspberries; Acacia sp. (to 15 ft. in rainforest); Alstonia scholaris - Milky Pine (seeds present).

Birds seen or heard:
Brown Pigeon, Eastern Whipbird, Rufous Thrush, Victoria Rifle Bird, Azure Kingfisher (near creek), Red-backed Wren, Black-headed Logrunner, Wompoo Pigeon, Mistletoe Bird, Lewin Honeyeater, White-winged Triller, Grey Fantail, Sulphur Crested Cockatoo, Buff-breasted Pitta, Forest Kingfisher, Square Tailed Kite.

Butterflies:
Union Jack, Northern Jezabel, Denrobium butterfly, Ulysses, Cairns Birdwing, Green Tiger, Cruiser (very restless).

Other animals:
Centipede, Horse Ant (long legs with abdomen held above thorax), Leaf Hopper (resemble moth but related to bugs), Lacewing eggs, Gastrocanthus sp. - Spiny Spider (two white stripes), Link Spider; Red-line Skink; Wild Pigs (diggings only).

After the first half-mile a ridge was crossed and one continued downhill on a southern slope. A sudden change in vegetation was noticed and the soil was gradually changing to a more and more gravelly topsoil (decomposed granite). Vegetation for the first 200 yards from the rainforest edge was a mixture of mostly schlerophyll species and some rainforest (forest canopy 100 ft. high):
Acacia sp. - Black wattle (80 to 100 ft., spreading open top);
Eucalyptus torelliana - Cadagi (trunk green to white, to 100 ft.);
Eucalyptus sp. - Bloodwood, and others; Treeferns;
Saw Sedge (fruits ripe on long stalks); Pteris sp. (5 linear lobes).

200 yards down from the top of the ridge the forest changed again to an open wet-schlerophyll type forest with large shrubs and many grasses as undergrowth. Soil included much decomposed granite and many large granite boulders on which orchids and ferns were found.

Callitris sp. - Cyprus Pine (spindly trees to 40 ft., fruits round 3/4" in six sections); Melaleuca sp. (to 40 ft., leaves 2" x ½"); Leptospermum sp. (to 30 ft., branch tips drooping, leaves ½" long very fine needles); Eucalyptus sp.; Banksia sp. (flowers just finished); Casuarina torulosa - Forest Sheoak; Shrub to 8 ft.(dense rounded shape, not in Myrtaceae family, but resembled Melaleuca linarifolia); Cherlanthus sp. - Fern (fronds to 10 ft. tall); Young trees to 20 ft. with rough pinnate leaves the size of Black Bean leaves; Grasses, several species; Epiphitic ferns on boulders; Moss (dry plants, yellow green, spore cases showing); Lichen (on roadside soil banks, white, coarse surface with pink upright spore cases); Dodder (very fine wiry climber, green stems and minute leaves, up to 20 ft. high); Hoya sp.

This strip of schlerophyll forest was approximately 1½ to 2 km wide and changed to rainforest once more only 200 yards from the creek.

Several orchid species thrived in this area:
Bulbophyllum sp. (leaves 2" x 1" , bulbs ½ " round);
Bulbophyllum baileyii; Philladota imbricata;
Dendrobium ruppianum; Cymbidium maddidum;
Ribbon Fern (epiphyte); Philodendron sp.; Plectranthus sp.;
Albizia toona - Mackay Cedar.

Different vegetation along creek bed (Surprise Creek):

Selaginella sp. (resembled Electric fern); Davallia sp.;
small creeping fern on rocks;
huge trees with enormous buttresses, height to 100 ft., leaves similar to Tristania laurina but no aroma, seed pods with 3 valves, 1/3";
Stenocarpus sinuatus - Firewheel Tree (young trees with large lobed leaves); Linospadix monostachya - Walking-stick Palm; Freycinetia sp.;
Grevillia sp.; Sedge (leaves to 2 ft. linnear).

In the creek were yabbies, frog or toad eggs, one fish species; and not observed, seven or eight species of fish a Platypus in pools.

John Van Grieken.

Banana Fancier

Reading comfortably at the kitchen table, time about 10.30 p.m., I heard the car drive in under the house, then footsteps on the back stairs- my wife returning from an evening out. Suddenly there was a hushed excited call from her: "Jack, Jack, come and look at this. Be quiet!"

Rushing downstairs as quietly as I could, I saw my wife pointing up towards the floor joists where a ripening bunch of bananas was hanging up. Just above the bunch was a beautiful creature I had only ever read about before - a striped possum - perched on the beam, staring straight at us and pretending for all he was worth not to exist. I quietly walked over and around underneath his perch but there was not even a blink of his eyelids, so perfectly still did he sit. However his give-away was about half a yard (or metre) of tail hanging down with its creamy tufted end. I was strongly tempted to give it a tweak but resisted the temptation for fear of frightening him off. Finally we went upstairs and left him to resume his feeding.

This particular bunch of bananas had ripened unnoticed on a plant growing in the long guinea grass about fifty yards from the house. When discovered, claw marks and loose skins showed that something had already been at it. The possum tracked it down to where I hung it and returned every night when all was quiet until the bunch was finished, eventually ignoring us and the children even when we were speaking. A sudden movement would frighten him and he would scamper back up the rope to his perch and freeze, with that give-away tail hanging down so prominently.

Authorities say that the striped possum is insectivorous, even having a specially developed claw for gouging insects from holes and under bark. Why the apparent change in dietary habits? The bunch had not been covered for protection from fruit fly, yet all the bananas we picked for ourselves were perfectly clean. Did he only eat those that were maggot infested?

Shortly after this, a crop of telephone peas which had overgrown the top rail of a six foot wire support started maturing pods at the top. Pea pods up to eighteen inches from the top rail were neatly split and the peas extracted overnight, usually about two days before being ready to pick. Although not sighted, possum was suspect, for it was hard to imagine even the white-tailed rat having the reach and dexterity to eat peas so far from support and so neatly. There was no evidence of grub infestation in the eaten peas.

No other bunches of bananas have been visited since but we still hope for possum's return.

Jack Berry. Kuranda.

Striped possum - Dactylopsila trivirgata - head and body with conspicuous black stripes down the midline and on each flank, remainder pale yellow or white - forefoot with five toes - the fourth toe longer than the remainder. - "Marsupials of Australia" , Basil Marlow.

Cairns Shelling

Living so near the Great Barrier Reef, shell collecting is a popular hobby with Cairns residents. Following the three basic rules - to return overturned rocks to their original position, to collect only a few good quality specimens of each species, leaving the rest to breed, and to forego females with eggs - a minimum amount of damage will be done on an ecological basis. In a society which is becoming increasingly conscious of the importance of conservation, to stress these principles in detail would be redundant. Therefore I shall describe habitats typical of the common genera and how to find them.

Although usually associated with coral reefs, cowries prefer rocky ree and reef flats. In these intertidal zones, they may be collected during the day from under dead pieces of coral, or at night by torchlight whil they are out feeding. Food requirements, ranging from soft corals and sponges to minute algae, vary from species to species, as does the depth of water they inhabit. For the average collector it is difficult to obta most deep water species himself, although one who combines his hobby wit fishing may bring up a few via his catch's stomachs.

The sheen on the surface of olive shells makes them almost as popular as cowries. These molluscs spend much of their time scavenging under the sand for food. In doing so they leave a trail which may easily be followed.

Do not be surprised, when digging hopefully at the end of a shell trac to bring up a long slender shell, an auger, or a mitre. Mitres are colourful shells, often sculptured, and share the olive's scavenging habits. Augers, on the other hand, are predators, catching their prey (thought to consist of worms) by methods similar to those of cones, to which they are closely related.

Whereas the poison of augers is not dangerous to humans, sixteen recorded fatalities prove that some cones are dangerous. These animals, displaying extremely variable colour patterns under their periostracum (an outer layer on the shell which seems to camouflage them) may be found in sand, mud and on reefs. Because they do not shun sunlight as much as the other animals mentioned here, cones are relatively easy to find. What prevents a mad commercial rush is the difficulty in removing the periostracum, but caustic soda or strong bleach ease the procedure.

Although this by no means exhausts the types of shells found in the Cairns vicinity, it summarizes the best known. Collecting shells is a captivating experience, but they need not be cherised as mere souvenirs of that experience. Besides their wide aesthetic appeal, shells have an entertaining background history and some scientific uses.

Annie Termaat

NATIONAL MUSE
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Dragonfly & Robberfly

> "Through fields and pastures wet with dew
> A living flash of light he flew."

These lines give some idea of the speed of the Anisopterid dragonflies -the most powerful fliers of their order and one of the speediest types of winged insect. They seldom fail to arouse curiosity and admiration for their powers of flight and grace of motion.

Carnivorous throughout their life history, they take a heavy toll of mosquitoes and other biting Diptera and will attack larger flying insects, including smaller species of their own order.

Their habit of flying relatively straight courses while hawking for prey leaves them open to attack by the larger Asilidae or Robberflies, which are more robust but slower than their dragonfly victims. The Robberflies launch surprise attacks from fenceposts, tree trunks and sides of buildings and, once having gripped the victim with their strong spiny legs, they pierce the thorax with their serrated proboscis and suc out its body fluids.

I have observed the capture of dragonfly by dragonfly and dragonfly by robberfly, and have noticed these insects with their prey on several occasions. It is difficult to approach close enough for a good photograph

Clyde Coleman

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CONTENTS

Bush Curlews *by Joan M. Wright, M.A., B.Sc.* . . . . . . Page 2
'Percy' *by W. G. Felton, Cairns.* . . . . . . Page 3
History of Semon's Horseshoe Bat in Australia *by Hobart M. Van Deusen, New York City.* . . . . . . Page 4 + 5
Observations on Marsupials (Mammalia) at Ross River Dam, Townsville *by Marcus Stevens, James Cook University of North Queensland.* . . . . . . Page 6
Lenbrassia - a new genus of Gesneriaceae in North Queensland *by J.F.Archibald, Mareeba.* . . . . . . Page 7
Notes in Brief. . . . . . . Page 8

Each Author is responsible for the opinions and facts expressed in his or her article.

BUSH CURLEWS

An observation of breeding behaviour in Far North Queensland.

Joan M. Wright, M.A., B.Sc:

Round Lake Tinaroo on the Atherton Tableland are many acres of land in the process of reverting to natural bush. Previously farm land, their use has been changed by the flooding of the Barron Valley and its tributaries. One such spot is a former school reserve, now the territory of a pair of Bush Curlews.

Very frequently the pair of birds can be seen by day, although they are usually described as nocturnal. They only call at night and from these calls it seems that their territory far exceeds the five acre reserve and extends out into the paddocks beyond.

By day the fine, statuesque birds can often be seen on the short grass never far from longer cover, bushes and bladey grass. They appear never to go down to the lake shore although it is only a few yards away. When observed they are usually standing stock still, their necks projectly forward like the beam of a crane. Their mottled and streaked brown feathers provide very efficient camouflage but the big golden eyes can be clearly seen as; they,in their turn, watch the human intruders.

Although shy they do not fly away readily, but when disturbed they run a few yards, then a few more until after a little while they melt into the bladey grass and disappear.

Late in October 1974 this pair of birds laid two eggs. No nest of any kind was made, the eggs simply lying on a small patch of bare earth. As the 'nest' was only about ten yards from the house, it was easily observed. Both parent birds were in constant attendance and the female could only be distinguished by the fact that 'she' sat on the eggs. She was very easily disturbed and frequently left the eggs for periods of 30-60 minutes. This was probably early in the incubation period; usually hen birds will sit tight and will not leave the nest. Both male and female were never far from the nest but did not try to divert attention by any special behaviour. While they were standing near the nest they frequently bobbed their heads and raised and lowered their tails. This behaviour pattern seems to be associated with the breeding period only.

There were two eggs, light brown in colour with blotches of paler and darker colour. These were observed on two successive weekends, and then they disappeared, presumably because they were hatched. The parents were not seen for two months.

At the end of this time the parents re-appeared in the usual way and one day a fledgling was found lying on the short grass near the house. It lay completely flat with its legs folded under its body and its long neck stretched out on the ground. So still was it that it appeared to be dead; it even failed to react when touched. The feathers were fluffy and pale coloured and the little body was thin and bony. However, the golden eyes were bright and there was an almost imperceptible flutter of breathing about the back. Anyone could have picked the young bird up assuming that it had been deserted.

After about two hours the 'dead' bird moved about a foot from its position and a little later it had gone, leaving a normal looking dropping as evidence of its state of health. A week later, *three* curlews were seen running, stopping, looking and running again in the accustomed way. One of the eggs had evidently hatched and by 'playing possum' the young one had escaped the attention of the kites and eagles which patrol the reserve.

Incidently, although it has been stated that bush curlews are becoming rarer, they are tolerant of people, houses and traffic. They are sometimes heard at night in the city of Cairns where their weird calls echo through the suburban streets. They have even been seen running about the streets round the City Council Chambers.

(Nomenclature: - - - Bush Curlew (Cayley), Southern Stone-curlew (Slater), Burhinus magnirostris.)

'PERCY'

Saturday, 18th January, 1975, 9.00a.m.: A small boy brought to my caravan a little bundle of feathers which he had found on the road. It was a Dusky Honeyeater and had apparently been knocked out. It was breathing rapidly and its eyes seemed glazed, the eyelids blinking all the time, but I could see no other injury. With the bird on my finger, I settled back on my bunk where I had been unhappily nursing a very sore leg. After a few minutes it started to preen itself a little then tucked its head under the wing and went to sleep.

I decided to call my little friend Percy.

My wife made up some sugar water in a small container by my bed. When Percy woke up and looked around, I very gently put a spoonful of sugar water under his beak and in no time he was sucking some up through his tongue. After his drink he just looked at me as much as to say 'thank you', preened again for a minute or two, then tucked his head under the wing to sleep. This drinking, preening and sleeping every ten minutes or so went on for a couple of hours and I could see that Percy was recovering steadily. He appeared to have complete trust in me, never loosening his tight grip on my finger.

About 11.30a.m. Percy awoke from one of his naps, had his drink, turned his little head from side to side to give me a good looking over, then started to do a lot of preening and stretching and testing of his wings. After awhile he hopped off my finger onto my chest, had a good look around, then hopped back on my finger and was given another drink. The curtains had been removed from this part of the van for washing and the wires were hanging loose. Percy's first little flight to one of these wires was quite successful. He made a few little flights here and there, not attempting to go out through the open door, and came back to my finger to have a drink.

After dinner Percy went exploring along the bench beside my bed. He flew onto the fan (which had been turned off) and looked it all over, then to the radio and the desk lamp where he had a little trouble keeping his balance. He returned to me for a spell, then back to the bench again in amongst the books and pencils. Eventually he found the cup of sugar water and in just a few moments had sampled some for himself; from then on when he wanted a drink he knew where to get it. Now and again he would fly over to me and stay a little while, then be off again. This went on all the afternoon. Towards dusk I could see that Percy was getting restless, trying to get through the window to the trees outside to find a perch for the night. My wife broke a small branch off one of the trees and stood it on the bench. Percy went straight to it, all through it, and eventually got to the highest twig and settled down for the night.

I watched Percy wake the next morning. He gave a few little whistling calls while preening and stretching his wings. After he had his drink and had his photo taken (the flashlight did not worry him at all), we decided it was time to send Percy on his way. I took him outside on my finger. He looked around for a moment or two then flew to a small branch a few feet away, paused there for a few more seconds, then flew right up into the top of the trees and started to feed amongst the blossoms. I was left with a wonderful memory of a little friend who trusted me and kept me company for a day and a night.

W. G. Felton, Cairns.

HISTORY OF SEMON'S HORSESHOE BAT IN AUSTRALIA.

Matschie (1903) described a new species of horseshoe bat with long, narrow, acutely pointed ears from a single female specimen collected at Cooktown on the Cape York Peninsula. He named this bat, with its peculiar club-shaped projections from the facial nose-leaf, *Hipposideros semoni* in honor of the famous German naturalist-collector, Richard Semon, who visited Australia in 1891-1892. The English version of Semon's fascinating book 'In the Australian Bush and on the Coast of the Coral Sea' was published in 1899. He wrote, 'in June 1892 I stayed for four weeks in the neighbourhood of Cooktown to get acquainted with tropical Queensland and to study its fauna'. While Semon does not specifically mention the acquisition of this small bat, there is no doubt that the bat was collected during this period. Troughton (1941) was the first to apply the common name, 'wart-nosed horseshoe-bat'. Hill (1963), in his excellent monograph on the genus *Hipposideros*, remarked on its close relation to the rarely collected *Hipposideros stenotis*, the lesser wart-nosed horseshoe-bat; in Queensland, this latter species is known only from Mt.Isa. Hill also commented, '*Hipposideros semoni* is clearly quite distinct from *H. muscinus* (of New Guinea)'. Tate (1952) considered *semoni* a subspecies of *Hipposideros muscinus*.

On 16th April, 1948, G.H.H.Tate and H.M.VanDeusen, on their way by the ship 'Lochiel' to Red Island Point at the tip of Cape York, put into Cooktown to visit Dr.H.L. Kesteven, the famous Australian anatomist and friend of Dr.W.K.Gregory of the American Museum. Dr.Kesteven presented the members of the Archbold 1948 Cape York (Australia) Expedition with a female *Hipposideros semoni* (AMNH 154856) which he had found clinging to the door handle of his car in Cooktown in September 1947; this was the second known specimen of this species from Australia.

On June 24, while camped at the edge of the so-called Gordon Strip of the Iron Range airport, Van Deusen discovered a female *H. semoni* (AMNH 154707) in the oven of a stove in an old house! Then on August 2 while staying in a vacant house at The Bend, two miles up the river from the town of Coen, George Tate and Van Deusen found the first known male of *H. semoni* (AMNH 154709) in a clothes closet!

Before I left on this 1948 expedition Stanley O. Grierson, who was later to accompany me on the Seventh Archbold Expedition to New Guinea in 1964, gave me a piece of shad net he had picked up on the bank of the Hudson River near New York City. This was before mist nets were well known in America and became required equipment on my later collecting expeditions. Little did I realize at the time how important this net fragment would become while the expedition was camped near the headwaters of the upper Nesbit River in the so-called Rocky Scrub of the McIlwraith Range (see Brass, 1953). One night while jack-lighting for mammals on the broad, rain forest covered top of the Range I noticed small bats flitting by less than five feet above the ground in the almost tunnel-like trail through the forest. The next day I spent several hours closing-up the large squares of the shad net with fine black thread. That night I returned to the 'tunnel' and set up the net. The bats were flying as usual. Some attempted and succeeded in flying through the meshes of the net, others flew almost to the net, hovered and then flew back up the trail. Frustrated, I next cut several small, limber tree branches. When the bats again flew toward the net and hesitated, I switched the sticks rapidly up and down hoping to knock one to the ground. One female *H. semoni* (AMNH 154710) was collected on August 17. More thread was knotted into the net the next day, and that night practically all the trail-flying bats came to a brief halt near the net while I worked the limber switches. Three more individuals (AMNH 154711-154713) were collected on August 18 and 19, all females. All of these specimens were collected before 9:00p.m. Four specimens of *Rhinolophus megaphyllus* were also netted or switched in this same vegetation tunnel. George Tate measured and made up these eight study skins. The nights were clear, moonlit, and the minimum temperatures about 58° to 60°F. Brass collected few insects at the light trap during our stay at this camp.

On 28th June, 1960, Basil J. Marlow of The Australian Museum, Sydney, found a female *H. semoni* in an unoccupied house in Coen. This individual was hanging in plain sight from a picture rail in one of the rooms. She became very alert and flew around the room until Basil finally collected her using an old tennis racquet which he also found in the house (specimen no. M.8116).

On later expeditions to New Guinea I collected many specimens of several species of *Hipposideros.* However, these were always found in rain forest or in the lower montane forests. We have no record of the habitat of the bat collected by Semon in or near Cooktown in 1892. However, Kesteven's individual was collected in Cooktown which is situated in savanna woodland or open forest (Brass, 1953). The nearest rain forest is on Mt.Amos, some 16 miles south of Cooktown. Coen is also surrounded by savanna, but rain forest is present about five miles to the east. The Iron Range airport (Gordon Strip) is also in open forest country, but rain forest is found less than a mile to the east. In the McIlwraith Range our specimens of *H. semoni* were inhabiting the depths of the rain forest called the Rocky Scrub.

It is most interesting that the *H. semoni* found in savanna localities were collected in the period from June to September, the driest period of the year on Cape York. Perhaps when we know much more about the life history of this insectivorous bat we will have a clearer understanding of why certain individuals hunt in savanna forest during the dry season. Could this be tied to the flowering of certain species of open forest trees and the resultant attraction of insects to the blossoms? Or is the habitat of this species of bat less restricted on Cape York than that of other species of this genus in New Guinea? *H. semoni* has been recorded from Papua and the Territory of New Guinea (Hill, 1963), but next to nothing is known about its habitat.

REFERENCES

Brass, L. J. 1953. Summary of the 1948 Cape York (Australia) Expedition. Bull. Amer. Mus. Nat. Hist., vol. 102, pp. 135 - 206.

Hill, J. E. 1963. A Revision of the Genus *Hipposideros.* Bull. British Mus. (Nat. Hist.), Zoology, vol. 11, pp. 1 - 129.

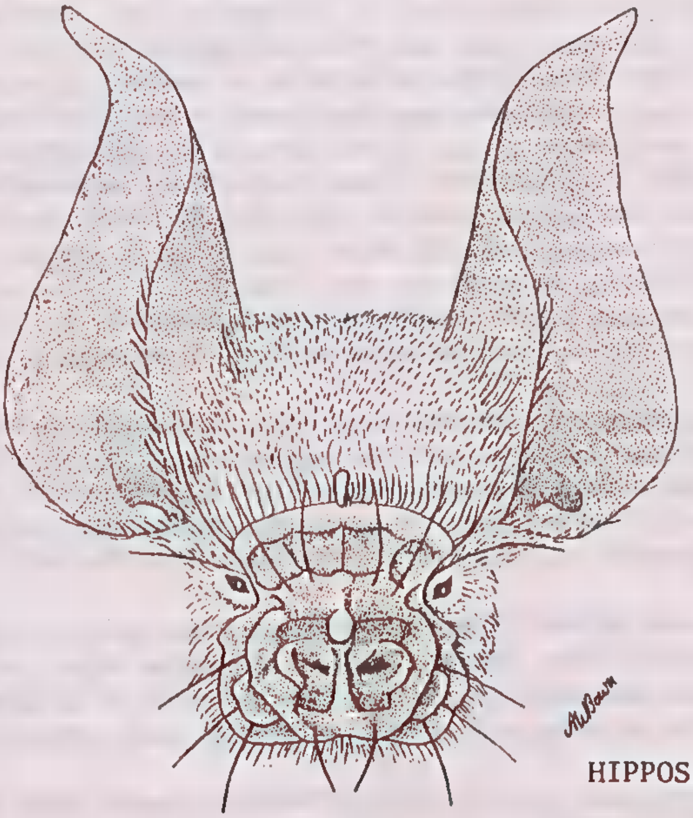
Matschie, P. 1903. Die Chiropteren, Insectivoren und Muriden der Semon'chen Forschungscreise. Denks. med. nat. Ges. Jena (Semon, Zool. Forsch. Austr.) 8:771-778 (Heft 6:129-136).

Tate, G.H.H. 1952. Mammals of Cape York Peninsula, with Notes on the Occurrence of Rain Forest in Queensland. Bull. Amer. Mus. Nat. Hist., vol. 98, pp. 563 - 616.

Troughton, E. LeG. 1941. Furred animals of Australia. Angus and Robertson, Sydney.

Hobart M. Van Deusen
Archbold Expeditions
American Museum of Natural History
New York City

27th January, 1975.



HIPPOSIDEROS SEMONI ♀ X3

OBSERVATIONS ON MARSUPIALS (MAMMALIA) AT ROSS RIVER DAM, TOWNSVILLE

by Marcus Stevens, Department of Zoology,
James Cook University of North Queensland.

Marsupials were studied by means of live trapping and direct observation in a small valley opening out onto the edge of the lake created by the newly constructed Ross River Dam. The valley is located 1.9 kilometers south southwest of the dam spillway. The newly completed Stage One of the Ross River Dam filled with water for the first time early in the 1973-1974 wet season creating a very large lake. Stage Two of Ross River Dam will inundate most of the valley portion of the present study area.

The dominant tree species in the open savannah woodland of the study area is Narrow-leaved iron bark (*Eucalyptus drepanophylla*). Bloodwood (*E. dichromophila*) and Cocky apple (*Planchonia careya*) are scattered among the iron bark trees. Tea trees (*Melaleuca sp.*) and some *Poplar* gums (*E. alba*) occur close to the lake's edge. Narrow-leaf beefwood (*Grevillea glauca*) is common on the hill tops along with a scattering of the Monsoon tree (*Cochlospermum gillivraei*) and the shrub, *Coelospermum reticulatum.* Kangaroo grass, *Themeda australis*, is the dominant grass with black spear grass (*Heteropogon contortus*) also occurring on the slopes.

A combination of small Sherman traps, Elliot traps, and wire cage traps were baited with sweet potato soaked in linseed oil plus a mixture of rolled oats, peanut paste, and honey. Traps were set in the late afternoon and picked up early on the next morning on the following nights: 17 to 18 August, 24 to 25 August, and 2 to 3 November, 1974. The total trap effort was 44 trap nights. One trap night equals one trap set for one night. A total of 7 marsupials, 3 brush-tailed possums (*Trichosurus vulpecula*) and 4 brindled bandicoots (*Isoodon macrourus*) were caught during this time. They were all caught with the large wire cage traps which were set for a total of 16 trap nights. The small sheet-metal Sherman and Elliott traps, set for a total of 28 trap nights did not catch any mammals. Most of the captures were made close to and along the margin of the lake whereas the hill slopes yielded a poor catch. It appeared that the bandicoots came to the edge of the lake to dig for food in the moist soft sandy soil. The possums may have been seeking water, although at least one, a young female caught on two occasions, apparently resided on the study area.

Two of the four brindled bandicoots caught were females, neither of which had pouch young. One did have an elongated teat indicating that she apparently had young previously. Two of the three brush-tailed possums were females, one of which had a partly furred male pouch young. The other female, a juvenile, had no pouch young.

The following macropod marsupials were observed while on foot or from a vehicle: Grey kangaroo (*Macropus giganteus*), Whiptail wallaby (*Macropus parryi*), Wallaroo (*Macropus robustus*), Agile wallaby (*Macropus agilis*) and Plain rock wallaby (*Petrogale inornata*). Whiptail wallabies were sighted more often and in larger groups than the other species. Several groups of from four to eight were seen during early morning and later afternoon hours. Grey kangaroos were seen in groups of from three to five throughout the day. Only one Wallaroo was sighted in the trapping area. One group of four Agile wallabies was seen early one morning crossing the access road after being disturbed while drinking.

One plain rock wallaby may have been sighted at about 5.30p.m. one day. Its small size and stocky build were noted as it hopped over the northern slope of the trapping area. Large rock outcrops in the area would certainly provide good shelter for rock wallabies. Dr. G. Heinsohn (personal communication) has observed rock wallabies in this area in previous years.

An inspection of the northern slope showed very distinct trails used by macropods. The steep slope of the valley sides makes movement along contours of the slope by far the most convenient for these animals. One high trail led from some large rock outcrops around to the waterfront side of the slope. About twenty metres lower was another similar trail and a third trail connected the first two. On the lower slopes the trails criss-cross and are far less distinct.

The use of these trails was admirably demonstrated one morning when a whiptail wallaby was disturbed near the water's edge. It hopped to cover above the highest water line on the shore, stopped and turned, and faced the observer. Not convinced of its safety it hopped up the grassy slope until it came upon one of the low contour trails, which it followed to shelter.

I wish to acknowledge the assistance of Dr. G. E. Heinsohn who critically read the manuscript and offered useful suggestions.

LENBRASSIA - A NEW GENUS OF GESNERIACEAE IN NORTH QUEENSLAND

The family Gesneriaceae has provided many of our most beautiful cultivated plants: Saintpaulia, Gloxinia, Streptocarpus, Columnea and Episcea, to name just a few. However, the family is not well represented in the Queensland Flora, with only five genera recorded (Clifford and Ludlow 1972) of which the best known is probably the lovely little *Bouea hygroscopica* (Oriental Streptocarpus), which deserves far more attention as a cultivated species than it has had so far.

The species *Corananthera australiana* G.T.White is the only representative of its genus in Australia, and was described originally without fruit. In 1973, Dr.George Gillett of the University of California, while visiting North Queensland, collected *Corananthera australiana* with flowers and fruits, and concluded that there was sufficient evidence to distinguish the species from the other genera of the family. He has since described it (Gillett 1974) as a new genus Lenbrassia, named to commemorate Leonard Brass who collected so much in the South West Pacific Area. The new species, *Lenbrassia australiana*, occurs as a small tree in the understorey of dense rainforest on the Dividing Range from Mt. Spurgeon to Mt. Lewis and on the Thornton Range. Thus, as far as is known, it has a very restricted distribution.

The description of a new genus in our area is of itself of considerable interest, and this is heightened by Dr.Gillett's pleasant gesture of naming it after a man well-known to Queensland botanists, and who made such a great contribution to our knowledge of the Pacific flora.

REFERENCES

H.T.Clifford & Gwen Ludlow. Keys to the Families and Genera of Queensland Flowering Plants (Magnoliophyta).
University of Queensland Press 1972.

G.W.Gillett. Lenbrassia (Gesneriaceae). A new Genus Endemic to North Queensland.
J. Arnold Arbor. 55:431-4 1974.

J. F. Archibald
Mareeba, April 1975.

NOTES IN BRIEF

A few weeks ago a woman who lives along Upolo Esplanade at Clifton Beach near Cairns was busily mowing the grass outside her garden. As she passed a small low shrub, she noticed some activity underneath it and on investigation found that small turtles were emerging from a hole in the ground. Unfortunately there was no one around who could tell her what type of turtles they were. She called her neighbours to see the sight and they watched whilst about 100 small turtles dug their way out and headed straight for the sea. This might not be thought to be an unusual thing except that this was in a well built up area with plenty of traffic passing along the road.

Observation of Mrs. Geddes, Clifton Beach.
written by M.L.Cassels.

We would like to express our thanks to Mr. Thomas of Irymple and Mr. Baines of Melbourne for their donations to the Club. With money so scarce, these donations are most welcome.

Our thanks also to those members and friends who have responded to our appeal for Journal material. Further contributions, please!

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CONTENTS

Running River - Hidden Valley *by John Van Grieken* ... ... Page 2 & 3

Introduction to Odonata of North Queensland - *Excerpts from covering letter by Trevor Graves* ... ... Page 3 & 4 & 5

The Origin of Generic Names of Queensland Rainforest Trees *by James A. Baines* ... ... Page 5 & 6

Herpetological Notes *by Bill Hosmer* ... ... Page 7

Obituary - James Bravery *by John Orrell* ... ... Page 7

Notes in Brief.

Each Author is responsible for the opinions and facts expressed in his or her article.

RUNNING RIVER -- HIDDEN VALLEY, 25-28.3.1975.

This area is situated to the west of Mt.Spec near Townsville. It is mostly granite country cut by many creeks and gullies, with much decomposed granite on the hillsides, and sandflats along the larger creeks and rivers. Veg tation consists of open forest country with about ten species of trees and a great variety of shrubs and herbs on the grassy slopes, and different trees an shrubs along the river.

In the following list, R denotes growing on river flats;
S denotes growing on hillslopes.

*R Callitris sp. - tree to 30 ft.
*R *Casuarina cunninghamiana* - River Sheoak - tree to 20 ft.
*R Callistemon sp. - shrub to 10 ft., leaves short, stiff; only one red flowe with yellow tipped stamens.
*R Grevillea sp. - very similar to *G. banksii;* shrub to 10 ft.; still flowerin sparsely, cream brushes, seed not quite ripe.
R fam. Proteaceae (possibly Grevillea sp.) - shrub to 10 ft.; very narrowl lobed leaves; seed pods 2" long, flat and pendulous, seeds winged.
*R Cassia sp. (or closely related) - shrub to 6 ft.; dark green leaves with small sharp spine at the tip; flowers yellow.
R fam. Proteaceae - tree to 15 ft.; juvenile leaves deeply lobed to 12" lon adult leaves entire; masses of seed pods but only one flower seen, white bottlebrush type.
R Shrub - 4 ft.; leaves small, linear, 1" long; berries, purple and orange, unusually joined in groups of 4 to 6 on a straight stem parallel to th branch.
*R Dodonea sp. - tree to 20 ft.; leaves leathery, dull, lanceolate (typical o most species of this genus); flowers white, in clusters.
*R *Malaleuca leucadendron* var. *pendula* (weeping inland form).
*R Dodder - Cassytha sp.
*R Acacia spp. - 3 species, all shrubs.
R *Tristania conferta* var. *fibrosa* - tropical inland form of the Queenslan Brush Box.
*R *Eucalyptus microthera* - Flooded Gum - always found along inland rivers.
*S Eucalyptus sp. - Box.
*S Hovea sp. - Pea bush - purple flowers.
*S fam. Epacridaceae - possibly Epacris sp. - heath to 1 ft.; small, sharp leaves; small bell-shaped flowers in leaf axils, cream, 1/8"; berries ¼"
*S Styphelia sp. (fam. Epacridaceae) - Beard Heath - differing from the Epacris genus in having bearded or hairy edges on its bell-shaped flo ers.
*S Hibbertia sp. - Guinea flower.
*S Wahlenbergia sp. - Bluebells.
*S Thysanotus sp. - Fringe-lily.
R.S. Xanthorhoea sp. - Grass Tree - surprisingly growing on the wet river beds and on well drained slopes, not developing a trunk.

*S *Persoonia falcata* - Geebung.
R *Plerogymum cerasifera* - Burdiken Plum.
*S Pimelia sp. - Riceflower - small herbaceous plant to 12"; flowers white.
*S Goodenia sp. - small shrub; flowers yellow.
S *Araucaria cunninghamii* - Hoop Pine - these native pines are not found along the Running River but for some strange reason they flourish along Puzzle Creek, which is a tributary of this river. They grow in large stands on steep slopes among the large granite boulders.
S *Erythryna vespertilia* - Bats-wing Coral Tree.

* * * * *

During my travels through the three eastern states of Australia, I have noticed that the flora of similar habitats, that is decomposed granite slopes or sandstone areas, is also similar. * indicates that species of the same genus are found in the Grampians of western Victoria, which is sandstone. Many are also found in areas such as: Wilsons Promontory (granite); Canberra area (granite); Blue Mountains (sandstone); Carnarvon Gorge (sandstone); Tinaroo Creek Road, Atherton Tableland (granite).

John Van Grieken

INTRODUCTION TO ODONATA OF NORTH QUEENSLAND
(Excerpts from covering letter by Trevor Graves)

On November 10 and December 3, 1974 respectively, I accompanied members of the N.Q.Naturalists Club to Davies Creek and to the Rocks at Freshwater Creek, where I spent much of my time attempting to monitor species of dragonfly found in North Queensland. On my return to England, Mr. Stuart Foster bore much of the hard work of identifying the specimens collected. In the following list, damselfly species in family sequence are succeeded by dragonfly species in family sequence. It includes representatives from most families, notable exceptions being the Aeshnidae and Petaluridae. Even with these omissions it is remarkable how such a rich and diversified dragonfly fauna could be found in such a short time.

We utilised the standard text for keying out the species: "A Handbook of the Dragonflies of Australasia" by F. C. Fraser. We could not fault it for its taxonomic merit. However there were three points with regard to natural history that do not appear to have been mentioned previously:

1. *Pseudocordulia elliptica* being found in the vicinity of lily covered swamps.
2. *Orthetrum migratum* found in copula next to fast running stream.
3. *Orthetrum villosorittatum* said to breed in streams but larvae found and females seen to oviposit in stagnant waterholes.

Whilst in Australia I collected 55 different species of Odonata out of a possible 230, which once again bears out the point of a rich and diversified fauna.

ODONATA OF NORTH QUEENSLAND

by Mr. S. Foster and Mr. T. Graves

SUBORDER ZYGOPTERA

Family Protoneuridae	
Subfamily Isostictinae:	Oristicta filicola
Subfamily Protoneurinae:	Nososticta solida
	Notoneura solitaria
	Notoneura coelestina
Family Coenagriidae	
Subfamily Coenagriinae:	Ischnura pruinescens
	Ischnura heterosticta
	Aciagrion fragilis
	Ceriagrien erubescens
	Pseudagrion ignifer
	Pseudagrion microcephalum
Family Megapoagriidae	
Subfamily Argiolestinae:	Argiolestes aureus
Family Amphiterygidae	
Subfamily Lestoideinae:	Lestoidea conjuncta
Subfamily Amphiteryginae:	Diphlebia euphaeoides

SUBORDER ANISOPTERA

Family Gomphidae	
Subfamily Indictinogomphinae:	Indictinogomphus australis
Subfamily Gomphinae:	Austrogomphus amphiclitus
	Austrogomphus doddi
	Austrogomphus prasinus
Family Synthemidae	
Subfamily Syntheminae:	Eusynthemis nigra nigra
	Choristhemis flavoterminata
Family Corduliidae	
Subfamily Corduliinae:	Pseudocordulia elliptica
Subfamily Macrominae:	Macromia tillyardi
Family Libellulidae	
Subfamily Tetratheminae:	Tetrathemis cladophila
	Nannophlebia lorquini eludens
	Nannophlebia risi
Subfamily Libellulinae:	Agrionoptera longitudinalis biseralialis
	Orthetrum villosovittatum
	Orthetrum sabinum
	Orthetrum migratum
Subfamily Sympetrinae:	Diplacodes haematodes
	Neurothemis stigmatizans stigmatizans

Subfamily Rhyotheminae:	Rhyothemis graphiptera Rhyothemis braganza
Subfamily Pantaliinae:	Pantala flavescens Hydrobasileus brevistylus Tramea loewi tillyardi

- ooo -

If I am to single out any species for special mention, then *Diphlebia euphaeoides* must take the prize as the most beautifully coloured damselfly and *Marcomia tillyardi* the prize for the most difficult to catch! The majority of species identified were thought of as common to this area. However there were a few rare species found and identified, these being: *Argiolestes auereus, Austrogomphus amphiclitus, Austrogomphus doddi, Pseudocordulia elliptica, Orthetrum migratum, Raphismia bispina.*

THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES

Having completed the compilation of a series called "The Origin of Generic Names of the Victorian Flora", covering the full range of flowering plants and ferns in that State, I thought it would be of interest to contribute a series to the "North Queensland Naturalist" similar to that appearing regularly in the "Victorian Naturalist". As the latter is a monthly publication and the former is published only two or three times a year, there would not be space for anything more than a selective coverage, especially as the Queensland rain forests are extremely rich in number of genera and species.

The Victorian series was in two parts, Part 1 being devoted to those generic names given in honour of people, usually but not always distinguished botanists or collectors and patrons, and Part 2 to the remainder, under the heading: "Latin, Greek and Miscellaneous". No such division will be made in this Queensland series, but the names will as far as convenient be listed alphabetically. Occasionally the origin and meaning of a familiar name now superceded (reduced to synonymy) will be included, because of its special interest.

The generic names are taken from the 3rd edition (1970) of "Australian Rain-forest Trees" by W. D. Francis, in which up-dated nomenclatural changes have been made by G. M. Chippendale of the Foresty and Timber Bureau. The author of this series was privileged to meet the late Mr. Francis, Qld. Government Botanist 1950-1954, at his Kangaroo Point home, Brisbane, in 1956. Thanks are due to the Australian Government Publishing Service, Canberra, publishers of this work, for permission to make use of such derivations as are supplied by Mr. Francis.

Further generic names are from "A Card Key to the Rain Forest Trees of North Queensland" by B. P. M. Hyland.

Abbreviations used are: Gk = Greek; Lat = Latin; * = introduced. The first instalment of the series follows.

Acacia. Gk akakia, the name of *A. arabica*, of tropical Africa and western Asia (from akis, a sharp point). Only very few of Australia's 600 species are true rain-forest trees, mainly *A. bakeri*, Marblewood or Scrub Wattle. The genus is in family Mimosaceae (virtually a sub-family of Leguminosa

Acratium. Named by A. P. de Candollo, who must have been reminded of maples, the generic name of the true maples being *Acer*. N.Q. has 5 species, known as kinds of quandong, as are Q. species of *Elaeocarpus*. Both genera belong to family Elaeocarpaceae. Quandongs in southern Australi are species of *Santalum*, in family Santalaceae. Quandong was an aboriginal word for these edible fruits.

Ackama. Formed by Allan Cunningham from makamaka, Maori name of a New Zealand species, *A. rosaefolia*. Qld's *A. paniculata* is Rose-leaf Mara the latter an aboriginal name for the tree in s.e.Q. Family Cunoniaceae.

Acmena. Said to be the name of a nymph, or one of the names of Aphrodit (Venus), perhaps derived from Gk akmenos, full-grown, in full vigour. Australian species of *Eugenia* are now referred to this genus, and others t *Syzygium*. *A. smithii*, Lilly-pilly, is also known as Red or White Eungella Gum, from its occurrence in the Eungella Range. Family Myrtaceae.

Acronychia. Gk akros, terminal, at the end or edge; onyx, nail, talon, claw; because the points of the petals are curved and look like claws. *A. acidul* is Lemon-wood, and a species shared by Q., N.S.W., and e.V. is known in the south as Yellow-wood, the name in Q. of *Flindersia xanthoxyla*. Cun oniaceae.

Agathis. Gk agathis, a ball of thread; from the appearance of the catkin on the female trees, or of the cone to a ball of twine. Q. has 3 species, know as N.Q., S.Q. and Black Kauri, the name kauri being the Maori word for *A. australis*, of North Island, N.Z. Family Araucariaceae.

Ailanthus. A Latinization (better Ailantus, but influenced by Gk anthos, flower) by Desfontaines o[illegible]nit, the Moluccan name for **A. glandulosa*, Tree of Heaven (of. Malay kayu langit = sky tree; kayu, wood or tree; langit, sky or heavens). *A. triphysa* (syn. *A. malabarica*). White Bea or White Siris, is native to Q. but extends to India (Malabar Coast), etc. Simaroubaceae.

Akania. Gk akan, genitive akanos, a prickly shrub; because the margins of the leaflets are prickly-toothed. Fam. Akaniaceae (monotypic genus and family).

Alangium. A Latinization of the name in the Tamil language, alangi (Malabar). Q. species, *A. villosum*, is Muskwood or Black Muskheart. Fam. Alangiaceae.

Albizia. After Filippe del Albizzi, a Florentine nobleman who in 1749 introduced *A. julibrissin* into cultivation. Two Q. species are Acacia Cedar (not a good name) and Yellow Siris. Fam. Mimosaceae.

Alectryon. Gk alektryon, a cock (possibly alluding to the comb-like crest on the fruit of the type species, *A. excelsus*, Titoki, of N.Z.). One of Qld's 6 species, *A. subscinereus*, extends beyond Twofold Bay (the southern limit given by Francis) to east V. where it grows near Genoa Gorge; it is known as Smooth Rambutan, the latter name being used in Asia for species of *Nephelium*, to which genus the Australian species were formerly referred. Sapindaceae.

HERPETOLOGICAL NOTES

Recent studies on Rain-forest amphibians on Mt. Bartle Frere, Atherton Tablelands side, has revealed the presence of three species of frogs Genus Cophixalus, Fam. Microhylidae) which represent new taxa. One of these is a most spectacular form possessing a vivid scarlet-red blotch on the top of the head, followed by a broad median longitudinal stripe to the anal area; it lacks the characteristic pair of ocellate spots of the sacral region associated with the relatively common species, *Cophixalus ornatus.* Two other forms I distinguish as hitherto undescribed species are quite small, but distinctly patterned; they are distinguishable by differences in proportions as well as color and habitat. Unfortunately each of these new forms is to this time represented by a single example. It is hoped to obtain further material of the three forms before I attempt to describe them.

Bill Hosmer

OBITUARY - JAMES BRAVERY

The passing of Jim Bravery on June 30, 1975 took away one of the Tableland's (and indeed one of Queensland's) most versatile characters.

Jim was one of the first soldier-settlers to take up land on the Atherton Tableland and at the time of his death, at the age of 78, was still farming - in partnership with his son - the original block which he had selected in the early twenties. He was the only soldier-settler able to claim this distinction.

In his young days he was a keen footballer, and later he took up golf.

But apart from sport, Jim's real interest was ornithology. He was considered by both Australian and overseas experts to be the world's leading authority on the bird life of the Atherton Tableland.

Yet, although famous in his own particular sphere - he contributed many original papers to scientific journals - Jim was essentially a humble man. His re-discovery of the Oriental Cuckoo in 1962, he shrugged off as "an interesting observation", yet it was the first confirmed sighting since 1908.

A humane man, he never killed to carry out his researches. He was visibly distressed when, almost twenty-five years ago, he observed what he believed to be a sub-species of the Horsfield Bushlark and to confirm the discovery, specimens had to be taken for museum examination. The only museum specimen extant at the time was in New York! A tightly timed operation involved road transport from the Tableland and re-packing of the specimens in dry-ice in Cairns by members of the N.Q.Naturalists' Club for dispatch by air to Brisbane. The Museum, and Science, obtained their research material. Jim's only comment was, "I'd never do it again."

He loved birds. He had seen the Tableland change from a close-growing rainforest to open country as the settlers cleared their corn-land and established dairy farms. Over the years he had watched the scrub-birds diminish and the birds of the open forest and heathlands move in. The ponding of Tinaroo Dam gave him an extended interest as he patiently listed, after positive identification, the advent of the "New Tablelanders" to the man-made

Despite his dedication to his hobby, Jim gave freely of his time and remarkable ability to civic projects.

All who knew him will mourn his passing.

John Orrell

NOTES IN BRIEF

Members will note, regretfully, inevitably, the increased subscription rates, following the steep increase in postal charges. Ordinary membersh now is $4.00 and for country members $3.50.

Our sincere thanks to those members who have generously added a little extra donation to their subscriptions in recent months. Such gestu contribute to the morale of your sorely tried committee as well as to Cl funds!

Please, may we have some more contributions for the Journal?

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CONTENTS

The Shy Australian Water Rat .... Page 2
Some Observations of Birds around Armidale N.S.W. .... Page 3
The Origin of Generic Names of Queensland Rainforest Trees Part 2 .... Page 5
Rhododendron Lochae F v M .... Page 6

Each Author is responsible for the opinions and facts expressed in his or her article.

THE SHY AUSTRALIAN WATER RAT

The Australian water rat (Hydromys chrysogaster) is a native Australian creature of which most people know little. I must admit, before coming to North Queensland two years ago and meeting my husband who is studying diseases of feral rodents, I had never heard of, or ever seen a water rat even though in Tasmania where I come from, they are common along the drainage systems from the highland lakes to the rivers, lagoons, swamps and seashore.

A shy creature, the water rat hides by day and emerges under the cover of darkness to hunt for food. This would explain why we had never sighted one on our many bushwalking trips around the state. He is a carnivore and feeds on shrimps, prawns, small fish, and sometimes even lizards and small birds. One very observant person in North Queensland observed water rats collecting mussels from the rocks and was interested in the means the rat used to prize the shell open, but the rats left the mussels on the rocks in the hot sun until the heat caused the mussel to open his own shell.

An adult water rat is about the size of a small cat. He has a beautiful coat of fur, which is brown and sparsely tipped with golden yellow on the back, and heavily tipped with the same golden colour on the flanks and belly.

The animal used to be trapped in large numbers and the fur pelts exported to countries such as South Africa, where fur coats were made from the beautiful skins, but it is now fully protected in most states. There is an annual open season during the winter months in Tasmania, but the number taken in recent years has not been great. The long tail is white tipped and the feet are webbed, which make him an excellent swimmer, as the hind feet are also used as paddles, which propel him speedily through the water.

A very stealthy creature, the water rat can move silently over the rocks and is often responsible for stealing a fisherman's bait, or even his catch of fish.

My husband John was interested in trapping a few water rats as they are sometimes known to carry the disease Toxoplasmaosis. Toxoplasma can in rare cases be transferred to humans, and can have serious consequences if contracted by a pregnant woman, causing her to abort or give birth to a deformed baby.

We never had any trouble catching water rats around the waterfront in Townsville, using wire spring door traps and prawn heads as bait. Early in April we caught a large female rat, and were surprised three days later when she gave birth to three beautiful baby water rats. Our surprise was due to the fact that most of the literature we had read on water rats has said the breeding season was mainly in spring and summer. One book even stated 'during the late summer, autumn and early winter the female water rats are anoestrus'.

The babies were approximately three inches long and weighed about three quarters of an ounce. They were blind and hairless, and had smooth dark brownish black backs and pink abdomens. The pigment was missing from the tip of the tail, and this would later on give the characteristic white tipped tail appearance. The female water rat has two pairs of teats which are situated inguinally, and the average litter size is two or four. Our babies began to suckle very soon after birth.

On about their fourth day, the babies began to grow a few hairs on their backs, and by the end of the first week each had a sleek short black coat of fur. Small teeth began to appear at seven days and the eyes opened after about two weeks.

We fed the mother rat a varied diet containing roast chicken, cooked and uncooked fish, raw meat and prawns. I observed the baby rats attempting to chew some raw meat eighteen days after birth but the mother rat continually pushed them away from the meat with her hind foot. At this time they also began to lick at the dish of water, although they still suckled from their mother. Typical of any young animal the baby rats became very playful with each other, and curious of their surroundings.

The female rat is a very protective mother, and any time we got too close to the cage she quickly ushered her youngsters to the back of the cage, and growled a warning to us not to go any closer.

The water rat is capable of an independant existance at about thirty five days of age, and when our litter had reached this age they were released.

ROZANNE GLAZEBROOK.

SOME OBSERVATIONS ON BIRDS AROUND ARMIDALE, N.S.W.

We have recorded 107 species of birds on our small property just outside Armidale in the three ears we have been keeping notes, and this year, in an area of about 3 acres, 14 species of birds have uilt 29 nests. Previously the area was part of the territory held by Noisy Miners but, with the retreat f these pugnatious birds and a favourable season, many birds nested close together in an open forest rea which has a dense ground cover of native grasses and herbs.

Five female Rufous Songlarks were observed foraging in the grass and feeding their young while only ne or two males were seen in the area. The Songlark nests were in dense grass and were about 10cm cross, cup shaped, made from bark of the yellow box (Eucalyptus meliodera) and lined with fine rass stems. Many male White-winged Trillers were seen competing for territories and two succeeded ne pair nesting 8 metres up in a completely dead tree, the other in a dense clump of leaves about metres above our driveway. These songlarks and trillers produced most of the birdsong this season.

A pair of Orange-winged Sitellas built but abandoned a nest in the dead tree, after raising two previous clutches in two other nests nearby. The second of these was close to the nest of a pair of Fuscous Honeyeaters peacefully nested near the trillers and also near the nest of a pair of White-naped Honeyeaters, high in the dense canopy of a yellow box tree.

A pair of Dusky Woodswallows built an unusual nest - an untidy bundle of twigs among a few small branchlets about 5 metres up and proceeded to attack the pair of Black-faced Cuckoo-shrikes who had built in their tree two weeks previously. They also attacked the Willy Wagtail and Restless Flycatchers nesting nearby. Other woodswallows in the area have attacked many birds from Little Eagles and Brown Goshawks to Eastern Rosellas and Hooded Robins.

Two nest raids were noted in the area: a Noisy Friarbird tore apart the newly finished nest of a Fuscous Honeyeater and used the material in its own nest. That particular pair of Noisy Friarbirds raised one young but another pair half a mile away lost two fledglings on consecutive days to a male Brown Goshawk. No wonder goshawks receive a hostile reception from friarbirds and other species. One of the trillers nests was pulled apart by a Black-faced Cuckoo-shrike immediately after it was vacated by the fledglings, this nest material being just dropped to the ground.

Four nests of Diamond Firetails were seen in this area but only two were used. All were in the tops of eucalypt saplings about 3 metres tall and were composed of grass with significant amounts of yellow daisy plants. Other pairs have built nests in clumps of mistletoe high in large trees.

One pair of Restless Flycatchers raised two young in their first nest but abandoned two later nests. Similarly a pair of Willie Wagtails abandoned their second nest in the area, having raised three young in their first nest.

In the Season, one pair of Welcome Swallows built two nests under the eaves and raised a brood of three in each nest.

A pair of Hooded Robins built a nest less than a metre off the ground in the fork of a small sapling but the nest was destroyed by an unknown agent soon after two large olice green eggs were laid. The pair stayed in the area for some weeks after this but now are gone.

The season ended abruptly as the dry December gave way to an even drier January and by early February only the finches are still feeding nestlings.

The following 55 species of bird were observed breeding in the Armidale area during the season.

Birds seen breeding in the Armidale District 1974/75 session.

Coot
Horsfield Bronze Cuckoo
Black-faced Cuckoo–shrike**
Black Duck * *
Musk Duck
Wood Duck *
Little Eagle *
Grey Fantail **
Doublebar Finch **
Gold Finch
Brown Flycatcher *
Satin Flycatcher *
Restless Flycatcher*
Noisy Friarbird **
Tawny Frogmouth **
Brown Goshawk **
Little Grebe *
Crested Grebe *
Whitefaced Heron *
Fuscous Honeyeater
White-naped Honeyeater **
Yellow-faced Honeyeater **
Sacred Kingfisher **
Magpie **
Fairy Martin **
Tree Martin *

** Mistletoe
* Dusky Moo
Eastern Striated Parda
Red-rumped Pa
** Pee
* P
* * Spurwing Pl
** Hooded R
Scarlet R
* Crimson Ro
Eastern Ro
Orange-winged Si
Rufous Son
** Spar
Sta
* Pied
** Welcome Swa
** Eastern Swamp
* * Black S
* Yellow-tailed Thor
White-throated Tree Cre
** White-winged Tr
Speckled War
** Rufous Whis
** Dusky Wood Swal
Blue

PETER METCALFE.

** These birds are known to breed also in North Queensland.

* These birds occur in North Queensland. Ed.

AUSTRALIAN FISHERIES, Sept. 1975 reports the death in Sydney on July 17 of GILBER WHITLEY, former Curator of Fishes at the Australian Museum. ..

Mr. Whitley, who was aged 72, emigrated from England in 1921 and joined the Australian Mus the following year. He retired in 1964, but as an Associate of the Museum he continued an active there. He worked throughout Australia and New Guinea and took part in more than 80 colle expeditions, and was recognised as a world authority on sharks.

Mr. Whitley was also a valued member of our Club and over the years wrote several articles for journal. News of his death has been noted with sincere regret.

EMBEDDING INSECTS & OTHER SPECIMENS IN CLEAR PLASTIC, by M. S. Moulds, published by Australian Entomological Press, 14 Chisholm Street, Greenwich, N.S.W. 2065. $2.00 plus 30c postage.

Quoting from Introduction: "The process described here enables specimens to be embedde clear plastic blocks, thus allowing good visibility even with the use of a microscope, while specimen is protected from damage." Straight forward directions are given for the treatment of b dry and "wet" (fleshy) specimens. A book most useful for teachers and students of biology.

THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES, Part II

BY JAMES A. BAINES.

ERRATA: In the forst instalment of this series (N.Q. Nat 166) the genus *Acronychia* is in the family Rutaceae, not in Cunoniaceae.

****

EDITOR'S NOTE: Letters inserted before certain names –
STCN= Standard Trade Common Name
PCN = Preferred Common Name (likely to become the standard name).

****

Aleurites Gk aleuron, wheaten flour; referring to the mealy substance with which the plant is covered. There is one native species in n.e. Q., *A. moluccana*, Candlenut. Tung Oil is obtained from *A. fordii* , and Japanese Wood-oil from *A. cordata* Fam. Euphorbiaceae

Alphitonia. Gk alphition, barley meal; in reference to the dry , mealy quality of the fruit pulp or mesocarp of these tall trees. *A. petriei* is White-leaf, White Ash, Red Ash, or Red Almond. STCN Pink Ash. Fam Rhamnaceae.

Alstonia. Named by Robert Brown after Dr. Charles Alston (1685-1760), professor of botany, Edinburgh University, 1716-1760. *A. scholaris*, White Cheesewood or so-called "Milky Pine", is not coniferous, but in family Apocynaceae.

Amorphospermum. Gk amorphos, without form; sperma, seed; from the shape of the single seed within the black, globular fruit. *A. antilogum* F. Muell. (1869) was placed in *Lucuma* by F. M. Bailey (1900), and in *Chrysophyllum* by Vink (1958). Vernacular names are Brown Pearwood and Silky Hornbeam. Sapotaceae. Accepted synonym is *Chrysophyllum antilogum* - STCN Plum Boxwood.

Anopterus Gk. ana, upward; pteron, wing. There are only two species in this Australian endemic genus, *A. macleayanus* (s.e. Q. and n.e. N.S.W.) - STCN Anopterus - and *A. glandulosus*, Tasmanian Laurel. Fam. Escalloniaceae.

Antirhea. Gk. anti, against, opposite, rhea, flow. A.L. de Jussieu published the name given by Commerson, who may have been referring to a streamside habitat, rheos meaning stream (because it flows). Two species, fam. Rubiaceae.

Aphananthe. Gk. aphanes, invisible (from phanos, light); anthos, flower, alluding to the small flowers. (*a.philippinensis* is Q. "Native Elm" , better called Axe-handle Wood or - STCN Grey Handlewood. Fam. Ulmaceae (from Ulmus, elm genus).

Apodytes. Gk apo, away from; dytes, burrower: presumably because the roots spread away from the base of the trunk, which is not buttressed; often coppice shoots and many branches arise from base of stem. *A. brachystylis* - STCN Buff Alder. Family Icacinaceae.

Araucaria . From Arauco, a province of central Chile, where the Monkey Puzzle Tree, *A. araucana* (syn. *A. imbricata*), was first discovered and is known as araucanos, as are the Indian tribesmen originally inhabiting the region. *A. cunninghamii*, Hoop Pine, and *A.bidwillii*, Bunya Pine or Bunya Bunya, are Q. species, commemorating respectively Allan Cunningham (1791-1839), Kew collector, explorer, Colonial Botanist and Superintendent of Sydney Botanic Gardens, and John Carne Bidwill (1815-1853), Director of Sydney Botanic Gardens from 1847. Fam. Araucariaceae, which includes the kauri pines.

Archidendron. Gk archi, first in time, primitive; dendron, tree. The prefix archi- can also represent archos, a chief. (first in importance). Mueller named the genus, which is in family Mimosaceae. One of the N.Q. species is known as Salmon Bean

Archontophoenix. Gk. archon, archontos, a chieftain; phoenix, the date palm (P. *dactylifera)*, from phoinix, purple-red; alluding to the majestic appearance of these palms. *A. cunninghamiana*, Bungalow Palm- PCN Piccabeen Palm- is a Q. species. Palmae.

Argyrodendron. Gk. argyros, silver; dendron, tree; alluding to silvery sheen on underside of leaflets. A. *trifoliolatum* has many common names including Booyong, Hickory, Stave Wood, Crowsfoot Elm, Silky elm, Brown Oak and-STCH Brown Tulip Oak. Sterculiaceae.

Arytera. Gk. aryter, a ladle or cup; alluding to the concave valves of the fruit. *A. lautererana*, Corduroy Tamarind, has sapwood with a wrinkled surface resembling corduroy cloth, and fruit with pulp resembling tamarind in flavour, *Tamarindus* being in family Caesalpiniaceae whereas *Arytera* is in Sapindaceae.

Atalaya. Gk. atalos, delicate. *A. virens,* whitewood, is Q. species. Sapindaceae.

Atherosperma. Gk ather, awn; sperma, seed; referring to the hairyness of the seeds. *A. moschatu* Southern Sassafras, is common in rainforests of V. & N.S.W., and only reaches Q. in the Macpherso Range, close to the border where the related *Doryphora sassafras*-STCN yellow Sassafras-also occu Monimiaceae.

Austromuellera: When C.T.White, Q. Government Botanist , wished to name this monotyp proteaceous genus after Baron von Mueller, he could not call it *Muellera,* which was already a val genus set up by Linnaeus' son (also Carl) for some Mexican and South American leguminous plants, he prefixed Austro- to show that the Australian or 'southern' Ferdinand Mueller was honoured, n the earlier German botanist, J.Mueller of Aargau. White did the same thing in naming Austrobaile after Frederick Manson Bailey, his illustrious predecessor, as *Baileya* was a valid genus of Americ composites. *Austromuellera trinervia* is known as Mueller's Silky Oak.

Austromyrtus Q.'s species were originally described as *Myrtus,* derived from myrtos, the Greek nam for myrtle, but were transferred to a new genus in 1941 by Burret, who prefixed Austro- becau it is an Australian genus with close affinity to *Myrtus.* The best known species is *A. acmenoide* Ironwood or PCN Scrub Ironwood. Fam. Myrtaceae.

Backhousia. After James Backhouse (1794-1869), a nurseryman who became a Missionary Frie (Quaker). He made noted journeys for this purpose in Tas., N.S.W & S.A., botanizing as he wen He published 'Esculents of Van Diemen's Land', and there is a 2 volume MS. 'Flora of N.S.W.' Kew, where director, Hooker, named this genus after him. *B. anisata,* Ringwood or Aniseed Tre and *B. Citriodora,* Lemon Ironwood, - STCN Lemon-scented Backhousie - are 2 of at least 5 species Q.Fam. Myrtaceae.

Baileyoxylen: Named after F.M. Bailey, author of 'The Queensland Flora' and 'Comprehensi Catalogue of Queensland Plants', with the Gk word -xylen, wood, added. C.T. White was the auth of this name too. *B. lanceolatum* is an endemic monotypic species. Fam. Flacourtiaceae.

Balanops: Gk balanos, acorn; opsis, appearance; because the brown, oval or globular fruits reminde Baillon, who named the genus, of acorns. There are 2 Q. species, including *B. australiana,* Pimp Ash - STCN Pimplebark. Fam. Balanopsidaceae.

Baloghia: Named by Endlicher after Dr. Joseph Balogh. *B. lucida* - STCN Scrub Bloodwood - Ivory Birch, is one of two Q. species. Fam. Euphorbiaceae.

RHODODENDRON LOCHAE F. v. M.

The genus Rhododendron occurs naturally in various regions throughout the world, but th places where it grows best are in the high mountainous areas of northern India, Northern Burm Tibet and western China; subtropical regions with both high altitude and high rainfall.

A subgroup of the genus, the section Vireya or Malesian rhododendrons, grows mainly in mountai ous regions of Malaya, Indonesia, Borneo and Papua-New Guinea, but with a few out-lying specie one of which, *Rhododendron lochae,* grows in the mountains of North Queensland.

In July, 1855, A. C. Gregory's North Australian exploring expedition in search of Leichhardt ha as botanist Baron Ferdinand von Mueller. When von Mueller saw the rugged outline of Mt. Bellende Ker he speculated whether rhododendron, vaccinium, and quercus, which are plant form characteristic of cool Malayan sylvan regions, would be found theron. Subsequently Messrs. Saye and Davidson, in 1887, first ascended the mountain and found a rhododendron and a plant closel allies to vaccinium.

In the Victorian Naturalist of March 1887, von Mueller described this rhododendron, which he named *Rhod. Lochae* after Lady Loch, in recognition of her patronage of Victorian horticult and of rhododendrens in particular.

Sayer's account of the ascent of Mt. Bellenden- Ker appeared in theVictorian Naturalist of July 1887. He wrote that beyond the ridge by which he had ascended, the top of the range was razor backed with sides so high and sheer that rocks tumbling over could not be heard to fall. It was here that *R. lochae* was observed. When a Kanaka was asked to get it, he remarked, 'S'pose I fall, I n see daylight anymore; I go bung altogether.' So Sayers had to get it himself.

R.lochae was later collected on Mt. Bartle Frere by Kajewski in 1929 at 4700 feet, on Thornton Peak by Dr. L. Brass in 1932 at 3500 to 4500 feet, and on Mt. Finnegan by Dr. Brass in 1948. It has also been found on Mt. Spurgeon where it is very common and grows in associatio with a vaccinium, mostly as an epiphyte on large Eugenia trees.

In the Rhododendron and Camelia Year Book of the Royal Horticultural Society, 1966, Mr. B. enalaus of Victoria wrote that, on a visit to North Queensland, he had been led by Mr. Jack Wilkie wards the peak of Mt. Bartle Frere (5287 feet) There "*R.lochae* was not found as an epiphyte the steamy forest, although its reported host, *Eugenia ventenatti*, was examined whenever possible. has since been ascertained that that form of growth is peculiar to Mounts Spurgeon and Windsor..... here *Agapetes serpens* is usually associated with *R.lochae* as an epiphyte.

'Our overnight camp was established in the shelter of a huge boulder, and at daylight we found a obust specimen of *R. lochae* close by at 4300 feet. This proved typical of the twenty plants subequently found, each similarly rooted in a deep crack in or between boulders, with roots always ool and protected from sun, wind and collectors. The tallest plant reached 5 feet above its point f emergence and spread in loose straggling growth for about 5 feet. This straggly growth appears o facilitate occasional layering between surrounding boulders and may reconcile us to similar growth n other species, which receive assistance to survive from their not overtidy habits.'

Today, *R.lochae* is widely grown by rhododendron enthusiasts in Victoria, and to a less extent in ther states.

R. lochae has scarlet flowers, which are tubular-funnel shaped and pendulous, in clusters of from two to seven. The peak flowering period in Victoria is in February and March, but a well grown plant will have some flowers throughout the year.

Papua and New Guinea has a large number of native rhododendron species, and it would appear that *R. lochae* migrated south along the mountain ranges at a time when Australia and New Guinea were joined in one land mass. Although *R. lochae* is the only rhododendron species to have been discovered in Australia, it is not impossible that other species, as yet undiscovered, exist in the mountains of North Queensland. Reports have come to Melbourne from unqualified observers, at first of a plant with yellow flowers and later of one with white flowers, but in other respects similar to *R. lochae*. Whether these plants are in fact rhododendrons, we do not know, but certainly further botanical exploratory work need to be done in the North Queensland mountains, where *R. lochae* has its home.

The late Dr. L.J.Brass shared my view. In a letter to me in 1967, he wrote that he thought it 'entirely possible' that rhododendrons other than *R. lochae* remained to be discovered on the mountain tops of far north-east Queensland. No doubt all or nearly all of these peaks have been climbed, but some still have to be ascended by botanists or people interested in looking for rhododendron. The reports of rhododendron-like shrubs with white and yellow flowers would be well worth investigation.

We already have a *R. brassii*, a species from New Guinea, but how wonderful it would be to find a new rhododendron species in North Queensland and name it *'R. fleckeri'*

R.M. WITHERS.

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CONTENTS

Notes on a local fishing or Bolas spider Ordgarious Monstrosus
by Clyde Coleman, Edmonton Pages 2-4

Further notes on Australian Pratincole by Nancy Hopkins Page 4-5

The origin of generic names of Queensland rainforest trees part III
by James A. Baines Pages 5-6

An appreciation: Jack & Marion Cassels Page 6

Some Gulf recollections by L.E.Skinner I.S.O. Page 7-8

NOTES ON A LOCAL FISHING OR BOLAS SPIDER
ORDGARIOUS MONSTROSUS

BY CLYDE COLEMAN, EDMONTON.

The prey of the adult female *Ordgarious monstrosus* are moths and are caught by a viscid drop of transparent material attached to a short silken line whirled around by one of the spider's second legs.

This spider was found on 11/6/'75, clinging to a few tangled strands of web on the underside of a sandpaper fig leaf. She was resting back downward and partly hidden by other leaves which formed anchorages for an irregular open web. This web was roughly horizontal and was used as an anchorage for making the fishing line or bolas. It was enlarged and strengthened each time an eggsac was formed, but was never used either to capture or bind her prey.

The following night she was examined and found to be immature. Examination on 18/6/'75 showed her to be mature.

During these nights the nearby foliage was searched for a male, without success. One or two bolases were made most nights the spider was studied, made of a single strong silk line about 40-50mm. long, on the end of which were one to five drops of a very viscid water-clear substance that sparkled in the torchlight like beads of dew. One drop about 2mm. in diameter was most usual; those with a large number tended to be irregular in size and spacing.

Shortly after dark she would move to the underside of her web and cling there, back down, for about two hours, after which she would add a few more threads to the web from which she would suspend herself while forming the bolas. A vertical support line was formed by the spider lowering herself about 35mm. from the web and then climbing back up adding more silk as she went. Moving about 40mm. to one side of this point, she attached two lines to the underside of the web and then moved back to the vertical line while holding these last two lines, one by a third leg and the other held to the spinnerets by a fourth leg. Moving down the vertical line, she held herself upright by clinging to it by her four front legs, while her third legs gripped the line, now diagonal to her body. The other attached line, still held to the spinnerets by a fourth leg, now sagged below the level of the spider's body.

The viscid fluid for the bolas was now drawn from the spinnerets by alternate movements of the fourth legs and flowed down the attached line where it formed one big drop. This took about 20 seconds, after which the bolas was detached from the spinnerets and allowed to hang free. The method of drawing the fluid from the spinnerets varied, the legs being used either alternately, in unison or singly. When the one leg was used for this purpose the other held the line to the spinnerets.

Climbing to the attachment point of the bolas, the spider grasped the end of the line, fumbled for over a minute to free it from the web and gave it a vigorous whirling motion below the level of her body at about 30° to the horizontal. This whirling was intermittent, being maintained for about half a minute with irregular periods of inactivity. Whirling often seemed to be initiated by any rising of the breeze. This particular bolas was used for about three hours, after which it was drawn up and eaten. Within half an hour another had been formed and the whirling and resting intervals were repeated. At nearly midnight the spider was left to its own devices.

At different times the capture of two moths was observed, their strong fluttering as they were hauled in hand over hand, like struggling fish, was ample proof of the strength of the bolas. Prey was bitten on the head, which soon quietened them, and was sucked dry while held in this position.

One moth that had been caught by the gooey blob managed to break the line but fluttered to the ground where the bolas stuck it fast to a grass blade. It was caught and offered to the spider but was not seized, the spider moving towards her shelter. Later it was found that she would accept any small live moth that was placed on the bolas and would tie up these moths with her legs and hang them under the guy lines of her webbing, presumably to be eaten later. No moths of her own capture were attached in this way - probably believing one at a time was good fishing! One moth was struck more than once by the bolas nd escaped, but in between contacts it fluttered back towards the spider or the bolas. There seemed to be some attractant (probably odour) that lured these oths to the spider. Probably the escapee was struck on the upper wing surface; if so, the scales covering these would make the bolas much less effective by sticking to it.

On the night of 30/6/75 the first eggsac was formed; but was noted too late to observe initial details. About a fortnight later the whole process was observed.

On this occasion the spider was active within half an hour of darkness, first forming several strong guy lines radiating from a point where she later attached a loose fluffy looking vertical strand about 35mm. long. To the end of this she clung with her four front legs, head up, while her fourth legs drew fine fluffy white silk from the spinnerets and passed it up to the third legs, which wove it into a loose sheet covering the ventral surface of the abdomen. This was observed with a hand magnifier which was used throughout the process of sac formation. This weaving continued for about half an hour when all outward sign of activity ceased. The eggs were evidently being placed in the sac but could not be seen for the density of the sac now held pressed to the mother's body by her third and fourth legs and probably because the inner flocculent silk of the nest was of the same whiteness as the eggs.

Egg-laying took less than ten minutes. Then the actions of the fourth and third legs were repeated, but now that portion of the sac nearest the abdomen was woven over until it was roughly spherical and the diameter was about 9mm. This took over half an hourto achieve and then the action of the spider changed. Grasping the sac with all eight legs, she commenced applying very fine white silk to the surface by a rapid rising and oscillating movement of the abdomen. The spinnerets were touched lightly to the sac then quickly raised and moved sideways alternately, being lifted about 2mm. clear and sideways 1½-2mm. The silk was not applied in one thread but in a number of very small gossamer lines, clearly visible by angling the torch close to this busy weaver. She moved up and over the sac in a head up or down position with a varying angle to the vertical, all the while the silk was being applied at about 90-100 strokes per minute. Close inspection showed that she was also imparting a slow oscillation to the sac by the movement of her feet, which were not used in this application of silk. Silk was woven over the top of the sac and at the base of the supporting strand, but no attempt was made at this time to strengthen this flimsy looking line which freely allowed the sac to twist and cant sideways as the spider changed her position on its surface.

This spinning and weaving ceased at about 10.45 p.m. She then climbed to the radiating support strands overhead and gave them a fresh application of white silk, and then moved slowly along each of these and the numerous fine threads radiating from the end of each, applying a pale brown viscid substance by a raising and lowering of the abdomen without any sideways oscillation. This material hardened quickly and chamged to a brown colour like dead leaves.

By midnight she had finished this bracing and returned to the sac, again gripping the surface with all eight legs and applying the spinnerets with the previous rapid motion. This time the brown varnish-like material was applied. Though spreading like a slightly viscid liquid, it could be seen issuing from the spinnerets as minute separate streams blending only when applied to the surface of the sac and flowing into the tiny spaces of the closely woven white silk. This activity might seem monotonous if some thought were not given to the amazing muscular energy of the spider's abdomen. Attached to the rest of the body only by a pedicel about 1/6 of its diameter, it had already given 7,000 spider push-ups without pause or rest and in laying down the final coat of varnish it approximately repeated that performance.

The spider followed this by backing up the eggsac and now applying the spinnerets to the base of the vertical support strand, at the same time now giving the sac a distinct partial rotation while the varnishing of this vital part of the structure was continued upwards, the spider nearly standing on her head while applying this liquid glue. Reversing her position, she climbed the full length of this strand to the radiating strands, applying the varnish as she moved and giving the central point several applications, then backed down, By 2 a.m. she moved back to the sac and, assuming the head-up stance, applied the spinnerets to about the equator but this time pressing them firmly to the surface and then slowly raising them about 1½mm. This process was slowly repeated several times until a thorn-like projection 1mm. long was formed. Moving around the sac she formed four of these projections at irregular intervals and then moved back to the first projection. She again applied the spinnerets, moved away and climbed to the overhead supports, now trailing a strong silk line which she attached to outer twigs. Several of these lines were spun from the points of the sac to outside supports and some of the outer leaves to which they were attached were bound together and to nearby twigs.

Now at nearly three o'clock this amazing creature moved off to her shelter, leaving the observer weary but with an enhanced respect for her tenacity and with a few more problems to ponder.

This spider produced ten eggsacs from 30/6/75 to 9/9/75, the last being only about two thirds the volume of the others. The period between sacs was from seven to eight days. Spiderlings emerged in about three weeks, built small communal webs and ballooned away in a few days, depending on the weather. One emergence hole was cut in each sac and this was rough-edged. No parasitism was observed. One sac was cut open and eggs counted, 487, less than 1mm. diameter. Size of completed sac, pear-shaped (almost spherical), 13 by 11mm. As this spider is comparatively rare and the specimen studied produced over 4,000 eggs, the mortality must be terrific.

Nothing seems to be known of the methods by which the young spiders catch their prey. Do they snare prey as their mothers do and, if so, have they different means of attraction for the increasing size and different species of victims they will need as they increase to a size where they can capture the adult's prey?

It was noted that the support strand at the top of the sac was not strengthened until the hard varnish-like material had been applied to the surface of the sac. This may have been to allow flexibility of the sac's movement. This is only conjecture, but the finished sac is like nothing but a hard brown dry berry, inflexible and tough and evidently strong protection against parasite, predator and weather, and a suitable crèche for the children of a remarkable mother.

-oOo-

FURTHER NOTES ON THE AUSTRALIAN PRATINCOLE

BY NANCY HOPKINS.

Airstrips and a golf course have intruded on that part of the Townsville Common which at least as late as 1954 was the breeding ground of the Australian Pratincole, Stiltia isabella, the subject of past contributions to this journal. They may still breed nearby, but I no longer live in Townsville and refer now to past observations.

My first experience in 1938 was unusual. There was only one egg, and though the area was grassy, the chick was seen more than once. In later cases the land was bare, providing little cover, but the two chicks were seen only once, usually when newly hatched. I made only brief weekly visits but always found the parents in the nesting area, alert and often using decoy tactics. In at least one of these cases two immature but full-grown birds appeared close by after three weeks.

Dr. G. L. Maclean, writing in the Emu (1975), throws some light on the subject. He states that the chicks stay in the "nest", a slight depression in the ground, for a day after hatching, then are led to a disused burrow (usually a rabbit's) and keep to the same burrow during the period of dependence on their parents, who appear to entice them from their burrows to be fed.

Ready-made burrows would be rare in my main stalking ground. The 1938 birds possibly relied on grass cover. I quote from my notes: "9/10/38 ... found nest ... one egg .... 15th: Chick hatched ... tawny down .... 22nd: Chick in grass, could not locate at first, mother trailing wing. Later drove up to mother(?) and hick in open. Chick ... ran to cover .... 29th: Chick well hidden, both birds railed wings. 5th Nov.: Chick full-fledged, colouring immature but similar to dult, flies well. 12th: Three birds in usual place, seemed to be parents hepherding young, now mature."

If, as I then thought, and later knowledge confirms, my chick at the nest on the 15th October was newly hatched, it was flying well at three weeks.

As to the disappearing babies, I saw one pair through binoculars against lumpy earth that had been bulldozed into a rough ridge and glued my eyes to the spot, but they vanished as I approached. I searched in vain without thinking of an underground retreat, which in any case must have been well concealed, as I would have hunted among the clods.

Twice odd shelters were found. Once, meeting Dr. Beatrice Schuchard "birding" on the Common, I took her to where I had recently seen two nests with eggs. Guided first by the antics of two parents, and later by their tracks, we found two young under a flattened oildrum with incredibly little space below it. Despite the heat, the welter of tracks indicated that it was a regular retreat.

A week or so later I took Mr. Roy Wheeler to this place, but failed to find the young of either of the two nests, though the parents were displaying. We turned to what I suspected to be the territory of another. A pratincole perched on a rough lump of cow-dung moved away as we approached and we found two chicks under the edge of the dung. I doubt that this tiny cave could have accommodated them for long. They could have been first-day chicks, nests among dung being common.

All in all, my observations do not suggest that Australian Pratincoles spend the whole of their infant lives concealed in a burrow or its equivalent, but I should like to be able to stalk again with this (to me) new knowledge.

In the 1938 case, as already stated, a week-old chick was seen in the open with a parent. At another time I came upon a bird with two chicks about a week old, which certainly did not retreat into a burrow. I followed one chick for some distance and caught. Only one parent appeared, so perhaps it was a disorganized one-parent family.

References: Hopkins N., 1969, Rare Birds in the Townsville District.
N.Q. Nat. 16:26
1954, Breeding of the Australian Pratincole.
N.Q. Nat. 22:21-2.
Maclean G.L., 1973, Review of Biology of Stiltia and Peltohyas.
Emu 73:61-70.

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THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES Part III

BY JAMES A. BAINES.

Note: STCN = Standard Trade Common Name
PCN = Preferred Common Name (likely to become the standard name).

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Banksia. Named by L.f. after Sir Joseph Banks (1743-1820), who was with Cook in the 'Endeavour' and, with Solander, was the first botanist to study N.Q. plants. He was President of the Royal Society for 43 years and was a great patron of science with a special interest in Australia. The only species found in N.Q. rain forests appears to be B. integrifolia, known in the north as White Banksia and in the south as Coast Banksia.

Barringtonia. Named by the Forsters after the Hon. Daines Barrington (1727-1800), F.R.S., who wrote on British trees and left unpublished MSS. with the Royal Society. Allan Cunningham, botanist-explorer, discovered the Mount Royal Range in 1823. As the Barrington Tops, a plateau through which flows the Barrington River, is at the edge of this range, it is likely that the same Barrington is honoured, although George Barrington, an ex-convict chief constable of Parramatta and reputed author of several historical works on the colony of N.S.W., died in 1804. There is a rich sub-tropical flora in the

Barrington Brush. N.Q. has four species of Barringtonia, including B. calyptrata, which is known as Mango Pine, Cassowary Pine, China Pine or Cornbeef-wood but, to the timber trade, Barringtonia. The genus has 100 species and gives its name to family Barringtoniaceae.

Bauerella. Named by Borzi after Austrian-born brothers, Ferdinand Lucas Bauer (1760-1826), natural history artist with Flinders in the 'Investigator', and Franz Andreas Bauer (1758-1840), F.L.S., F.R.S., who was employed as a botanical artist by Sir Joseph Banks. This monotypic rutaceous genus is superseded, the plant now being called Acronychia baueri. The brothers are still remembered in the name of the genus Bauera (family Baueraceae).

Beilschmiedia. Named by C.G. Nees von Esenbeck after O.S. Beilschmied, German botanist, whose occupational surname means axe-smith (Beil, axe; Schmied, smith, cf. surname Schmidt). C.T. Beilschmied, apothecary in Silesia, translated botanical works into German. Francis lists three species known as Blush, Grey and Yellow Walnut respectively; they are lauraceous trees, not related to the true walnuts, Juglans (Fam. Juglandaceae); named from the look of the timber.

Betchea. Named by German botanist Schlechter after German-born Ernst Betche (1851-1913), who was a botanist at Sydney Herbarium, and collaborated with C. Moore in 'Handbook Flora of N.S.W.', 1893. The species is now Ackama australiensis.

Bischofia. Named in 1825 by Blume after M. Bischof. There is only one species, B. javanica, named from Java but extending to Samoa and including N.Q. It has been placed in a family of its own, Bischofiaceae, (see J.C. Willis' 'Dictionary of the Flowering Plants and Ferns'), but Burbidge retains it in Euphorbiaceae. It is known as Needlebark, Beefwood and STCN Java Cedar.

Blepharocarya. Gk blepharon, an eyelid; karyon, a nut; the fruits being contained in a globular involucre consisting of woody bracts. There are only two species including B. involucrigera, Northern Bolly Gum or STCN Rose Butternut. Francis and Chippendale retain it in family Anacardiaceae, but Airy Shaw has placed it in a separate family, Blepharocaryaceae.

Bombax. Late Latin bombax (from Gk bombyx), cotton. B. ceiba, Northern Cotton wood, Silk Cotton Tree, or STCN Kapok Tree, is included in Hyland's 'Card Key to the Rain Forest Trees of N.Q., but it is an introduction (native to India, Ceylon and tropical America). The Q. species is referred by Burbidge to Gossampinas, in family Bombacaceae.

Bosistoa. Named by F. Mueller after Joseph Bosisto (1827-1898), pharmacist, who discovered antiseptic properties of eucalyptus oil and was involved in pioneering its extraction commercially. Baron von Mueller also named Eucalyptus bosistoana, Coast Grey Box, of Vic. and N.S.W., after him.

Bouchardatia. Named by French botanist Baillon after A. Bouchardat (1806-1886), professor of medicine, Paris, who researched vanilla, arrow-root, arums and cinchona, and wrote a fine work on quinology. Melicope neurococca was once placed in this rutaceous genus.

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APPRECIATION

At the Annual Meeting on 14th September our President for nine years, Mr. Jack Cassels, and our Secretary for thirteen years, Mrs. Marion Cassels, both retired from office. As a gesture of appreciation of all the work that they have done for the Club through all the "ups and downs" of these years, they were both unanimously awarded Life Membership. We are grateful that they will continue to serve on the council and lend their moral support to the brave new office-bearers.

* * * * *

N.B. With the best will in the world, these office-bearers still need members to pay their subscriptions (now due) and to contribute material for the Journal if the Club is to remain viable. Please lend them your support.

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SOME GULF RECOLLECTIONS

BY L. E. SKINNER, I.S.O.

Over thirty years ago the region bordering upon the southern shores of the Gulf of Carpentaria, even in the immediate vicinity of Normanton itself, offered a wealth of bird life for observation.

It was then almost an isolated country where the nomadic life of the Aborigines had substantially ceased. Old timers attributed the large numbers of crocodiles, *Crocodilus johnstoni* as well as the saltwater crocodile, *C. porosus*, in lagoons and streams to the recession of the hunting habits of the Aborigines, especially in the taking of eggs. The white occupation of the country was described as "virtually stagnant and devoid of substantial new development with no reasonable prospect of future population growth."

Consequently there was little harassment of the bird life in that large area by its human occupiers. Pelicans were regarded as water polluters and of course were chased from any lagoon from which a station's domestic water supply was drawn.

However, some of the disturbing activities of the white occupation over the years on the balance of nature had resulted in the payment of bonuses by the local shire councils: one pound (or now two dollars) for a dingo scalp, irrespective of any ancestral cross breeding with domestic dogs, and six pence (or now five cents) for a pig's ear. These amounts had greater purchasing power in those days and, accordingly, the destruction of dingoes and wild pigs was a part time station activity.

The large birds of the region existed in considerable numbers. Apart from seabirds they were the Brolga (*Grus rubicunda*), Bustard (*Eupodotis australis*) locally called plain turkey, Jabiru (*Xenorhynchus asiaticus*), Pelican (*Pelecanus conspicillatus*), and the Pied or Black and White Goose (*Anseranas semipalmata*). Of these, the permanent residents appeared to be the Brolga and Pelican, in flocks. At the time a Pelican rookery existed near the mouth of the Staaten River.

Following the summer rains and floods the open country became well populated by Bustards, usually seen singly or in pairs; and each lagoon, however small, was seen to be the food supplier to a usually single Jabiru, apart from other species of birds. The Pied Geese, in large flocks, were nomadic.

Included in the bird life of the region was no small number of migrants who mainly inhabited the lagoons and streams during their stay. Their arrival and departure were usually noticed only by their sudden appearance in or absence from the locality, as the case might be.

The Bustards displayed little fear of an approaching motor vehicle but, when any person alighted from the vehicle, would keep their distance by walking steadily away.

However, the great migration from the region of Bustards that occurred in 1944 following the summer rainfall of 1943/4 which measured at Normanton only half the average, was a noticeable event apparently unequalled before in living memory. For eight days thousands of these birds flew from west to east low over Normanton. Their daily flying hours over that place were from between 3.30p.m. and 4p.m. until near dusk. For the first three days the first hour of the afternoon's flight saw the birds thickly extended northwards and southwards as far as the eye could see but their numbers dwindled as the afternoon progressed and also in the days that followed. A few stragglers always ended the daily trek.

Several years later a resident of Atherton at the time of this migration informed me that Bustards were numerous on that Tableland in 1944.

I have retained a list of birds observed late in the afternoon of 26th January 1944 during a short walk along the Normanton bore drain where it meandered across the clay pan to the Norman River filling two shallow depressions on its way: Brolgas (numbering about thirty); Pelicans (numbering over one hundred); Egrets (*Egretta alba*) in pairs and singly; White Ibis (*Threskiornis molucca*), a small flock; Black Duck (*Anas superciliosa*), a small flock; Grey

Teal (Anas gibberifrons), a small flock; Little Pied Cormorant (Phalacrocora melanoleucos); Terns, unidentifiable owing to distance; Whistling Eagles (tw (Haliastur sphenurus); Nankeen Kestrel (Falco cenchroides); Crow (Corvus orr Wood Sandpiper (Tringa glareola); Crested Pigeons (Ocyphaps lophotes); Maske Plovers (Vanellus miles); Banded Stilt (Cladorhynchus leucocephalus); White Headed Stilt (Himantopus himantopus); Magpie Lark (Grallina cyanoleuca); Bla Backed Magpie (Gymnorhina tibicen); Budgerigar (Melopsittacus undulatus) fly overhead; Red Tailed Black Cockatoo (Calyptohynchus magnificus) flying overhe Little Grass Bird (Megalurus gramineus); Masked Wood-Swallow (Artamus personatus).

On other occasions, visitors to the bore drain included flocks of Yellow-Billed Spoonbill (Platalea flavipes); Royal Spoonbill(Platalea regia); Easter Swamp-Hen (Porphyrio melanotus); and Black-Tailed Water Hen (Tribonyx ventral

Numerous lagoons across the Norman River received birds that did not ventu to the bore drain. Visitors to those waters, apart from ducks including the Burdekin Duck (Tadorna radjah), were the flocks of colourful Green Pygmy Gees (Nettapus pulchellus).

The main permanent permanent scavengers of Normanton town were the kites, Square-Tailed (Lophoictinia isura) and Fork-Tailed (Milvus migrans), in appar ently equal numbers. Overhead every day kites soared and swooped, performing aerobatics that airmen have been unable to imitate with their machines.

A magnet of attraction for these birds was the air close to whirlwinds and grass fires. Evidently disturbed grasshoppers and other insects became clustered there for easy taking. At breakfast time one morning a great commo tion in the backyard of the National Hotel brought all hurriedly to the scene A number of kites were flying out through the open door of a wire-netted (roo and sides) enclosure. Inside were several muscovy ducks quacking excitedly, and eight dead kites that had been killed by the ducks. The yardman, after throwing kitchen scraps to the muscovies, had left the enclosure door open an kites had swarmed in for a share of the food. Two ducks that had been sittin on eggs appeared to have been the main destroyers of the intruders.

Even a brief reference to the birds of Normanton itself in those days woul be incomplete without mentioning the Blue-Winged Kookaburra (Dacelo leachi) heralding the approach of light with its particular laughing notes; the early morning ground feeders, Diamond Dove (Geopelia cuneata) and Bar-Shouldered Dove (Geopelia humeralis); the plovers (the masked plover outnumbering the spur-winged plover (Vänellus miles novae-hollandiae)); the large flocks of Galah (Eolophus roseicapillus); the screeching Red-Collared Lorikeet (Trichoglossus rubritorquis); the mischevous Little Corella (Cacatua sanguinea); and the numerous nocturnal birds, locally referred to as "night hawks". One of the latter was killed by flying into the windscreen of a motor truck conveying me from Magoura Station to Normanton one night. I identified it to my satisfaction as a Northern Boobook Owl (Ninox ocellata).

During my residence in Normanton two grasshopper plagues were experienced. A host of birds gorged themselves but, adapting the words of A.B. Paterson, could make no "difference on a run When a grasshopper plague has once begun..

Over thirty years ago, towards the end of each year, the tree lined banks of the Magnificent River, an anabranch of the Mitchell River, resounded with the cooing of Torres Strait Pigeons (Myristicivora spilorrhoa). This was about the southern limit of their annual migration down the eastern shores of the Gulf for their breeding season.

I visited Kowanyama on the Magnificent River in 1973 and was informed that in recent years these pigeons have ceased to arrive in their flocks to breed on the Mitchell. The food is still there but it seems that elsewhere is now able to meet the needs of the fast diminishing migration of these birds from the north.

Although the demanding nature of my duties in those years of residence at Normanton did not favour a study of nature to any great extent, even cursory observations of the birds and animals of the region, as practised by many of the Gulf residents, assisted in making life there both interesting and enjoyable. After all, the country life "has pleasures that the townsfolk never know".

NATIONAL MUSEUM
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The NORTH QUEENSLAND NATURALIST

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CONTENTS

Australian Landsnails - Rainforest Species
by Phillip H. Colman 2

Techniques for shipping Live Terrestrial Molluscs
by Phillip H. Colman 3

The Origin of Generic Names of Queensland Rainforest Trees Part IV
by James A. Baines 5

Esturine Molluscs by Barbara Collins 6

The North Queensland Naturalists Club - from a Summary
by S.E. Stephens 7

Obituary 8

Each Author is responsible for the opinions and facts expressed in his or her article.

AUSTRALIAN LANDSNAILS - RAINFOREST SPECIES

by PHILLIP H. COLMAN*

In the past two years the Australian Museum in Sydney has been involved in a survey of the rainforests of eastern Australia. These extend from Cape York down the coast to just north of Sydney. A 'true' rainforest, in the botanical sense of the term in Australia, is very roughly, one with no eucalypts present (with minor exceptions). My interest in this survey was with terrestial molluscs. Other disciplines studied by colleagues, mainly from the Australian Museum and the Queensland Museum, were birds, reptiles and amphibians, mammals, insects, spiders, and a few other smaller groups. Botanical, geological and meteorological aspects were taken into account as well. My immediate colleagues were Dr. J.B. Burch, curator of landsnails, and Dr. W.F. Ponder, curator of marine molluscs at the Australian, and later Ian Loch, formerly of Cairns and now technical officer within our department. The survey looked at three groups of rainforest, those of mid-east Queensland, those of north Queensland and those of New South Wales in that order. This article will review results of the landsnail survey. Future articles will discuss problems affecting the study of Australia's landsnails. Each of the three areas covered about 10 sites, and those of north Queensland were from Mt. Molloy, through Thornton Peak and the Bloomfield River area to Mt. Cook, just north of Cooktown.

The results of the whole survey have been spectacular, and show us just how little we know of the molluscan fauna of Australia - at least of our rainforests. About 160 species were collected in all, of which about 36% are new to science! Because of the nature of the survey a strict methodology and time limit was adhered to at each site: 3 man hours of general collecting, plus ¼ hour each of arboreal collecting and of specifically searching tree trunks. As well, 3 x 2 litre bags of leaf litter were collected from the forest floor for later sorting back at the lab. Each site covered 3 x 3 hectare blocks, and note was made of the botanical classification of the site. Prolonged study of any area would yield some more species at least, though luckily snails don't move fast and an intelligent knowledge of habitat preferences will probably yield most species in that time. The evidence from the dead shells in the floor litter showed up species not collected otherwise. One area not studied at each site was the forest canopy. (If anyone knows a good way to study the molluscan fauna of a canopy some 100 feet up, please let me know!) This problem will be the subject of a future article.

Of the 160 species collected, many were small and came from the forest floor litter, and the yield in species and specimens shows how important the micro-mollusc fauna is in the breakdown of biodegradable matter, or if you like to put it another way, the recycling of nutrient. From the contents of three medium size plastic bags full of leaf litter from one site we sorted about 57 shells. Micro-molluscs range down to less than 1 mm

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in size, but lack of size does not mean a drab shell. Some small molluscs are exquisitely sculptured and easily out-rival their larger brethren in beauty.

Analysis of results show a certain tendency to vertical distribution limits. Few species were found to range from sea level to the three highest sites we covered, Mt. William (1259 m) in the Eungella Range west of Mackay, Thornton Peak (1260 m) north of Mossman, and New England National Park, northern N.S.W. (1300 m). Annual precipitation also dictated species distribution - and species diversity. The wetter rainforests in general yielded more species, although the wettest of all, New England, in its highest part, yielded by far the lowest count in species of all sites. The drier rainforests varied in species diversity. The driest were dry enough to allow inclusion of normally wet or dry sclerophyll forest species, so numbers of species were fairly high.

No species found appear to be plant eaters. This may come as a surprise to most readers, but as yet no Australian native snails or slugs have been recorded as being pests in this way. Those native species found in gardens were probably eating the already decaying leaves under your lettuce. In fact most of our species feed on the algal and fungal growth on leaves or trunks or rocks, or on rotting wood - and in the latter case ingesting the rotting wood to extract fungal breakdown agents. A few other species, mainly from the family Paryphantidae, are carnivores, preying on other snails and slugs and other soft bodied animals such as worms. A small, cryptic native slug, Prisma, of the family Rathouisiidae, a slug that looks more like a dead twig, about 4 cm long, and characteristically triangular in cross section, is also carnivorous. We recorded this rare slug from two sites. We would be particularly pleased, by the way, to receive specimens (alive preferably) of this slug, which would be found under logs and sticks on the ground, and, as I say, looking like a small twig adhering to the upturned log. It is probably not rare, but so discreet in appearance that it is always overlooked.

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TECHNIQUES FOR SHIPPING LIVE TERRESTIAL MOLLUSCS

The classification of Australian landsnails is based, at the moment, on studies of the shell alone. In recent years more and more attention has been directed towards the study of the animal that makes the shell, and many errors of yesteryear are coming to light. Malacologists at the various Australian museums are always very grateful for live specimens of landsnails. Much of their day is spent in the office, and although field work is essential for their work, no one person can hope to cover the many places he needs to look at, for distributional data, habitat preferences, etc. The following notes are given after some years of testing of techniques used in the shipment of live specimens. The amateur naturalist can help profoundly in the study of our landsnails, as he can in all other aspects of nature, and his help is always appreciated.

Live snails or slugs are always preferred to dead ones, as live animal characteristics can be noted, and if necessary photographed, before the specimens are preserved for further anatomical study.

Posting live terrestial molluscs: Pack in dry leaf litter or tightly wrapped in dry newspaper. It is better to wrap each specimen individually. Keep locality data separate, perhaps in a plastic bag, as landsnails tend to eat labels in preference to all else! If the environment of the parcel is dry the snails aestivate (become dormant). If moist they tend to become active and in so doing produce slime which can eventually suffocate them in the confined space. Slugs should be allowed slight moisture to stop them dehydrating, perhaps slightly damp leaf litter or the pulp from the centre of a rotten log.

Posting live aquatic molluscs: Layer them, in a watertight container, in sheets of moist toilet or hand towel paper or some such absorbent paper. Newspaper will do. It is best they be airfreighted or airmailed as they won't survive as well as landsnails.

Always remember to keep locality data separate from live specimens. Data is important. Exact site, altitude if available, date, habitat information, etc. is perhaps more important with terrestial molluscs than with marine. Most marine species have a planktonic larval stage allowing distribution over a wide area. Land molluscs don't, so regional variations are common due to lack of gene mix. A good label would read:-

> 7.5 km N. of Rockhampton, Qld., on left side of Bruce Highway, in dry, open eucalypt forest, under log, 17 Oct. 1976. Coll: P.H. Colman.
>
> or
>
> Rudd Creek, Upper Herbert River, Qld. In permanent waterhole 16 miles upstream from Gunnawarra Homestead, under waterlily leaves. 17 Oct. 1976. Coll: P.H. Colman.

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Editor's note: In a covering letter, Mr. Colman emphasized the importance to professional naturalists of the amateur naturalist in all fields, not only malacology. "The intelligent and observant amateur is of just as much importance to the professional as that professional's vast library and vast reference collections. We in the shell department would be sadly poorer off but for the many dedicated amateurs who happily do for us what we, in our offices, cannot do, no matter how good our library or collection."

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THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES PART IV

by JAMES A. BAINES.

Note: STCN = Standard Trade Common Name
PCN = Preferred Common Name (likely to become the standard name).

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Brachychiton. Gk brachys, short; chiton, an undergarment or tunic; alluding to the loose outer covering of the seed or the overlapping scales. *B. Rupestre*, Qld Bottle Tree, *B. acerifolium*, Flame Tree, and *B. discolor*, Scrub Bottle Tree or White Kurrajong, are northern relatives of Kurrajong of N.S.W., V., Q., *B. populneus*. Fam. Sterculiaceae.

Brackenridgea. Named by A. Gray after W.D. Brackenridge (1810-1893), born at Ayr (Scotland). but went to America to become assistant botanist on the Wilkes Antarctic expedition, 1838-42. On his return, he was a horticulturist in New York until 1854, then lived at Baltimore, Maryland. He published a monograph on ferns. The Q. Species, *B. australiana*, is endemic and is called Brown Ochna, being in fam. Ochnaceae.

Brassaia. Named by Endlicher, perhaps after William Brass, a collector in South Africa for Banks. *B, actinophylla*, Umbrella Tree, is now in *Schefflera*.

Breynia. Named by J.B. and G. Forster after German botanist, J. Breyn. The N.Q. species, *B. stipitata*, has no common name. Fam. Euphorbiaceae.

Bridelia. Named by Willdenow after French botanist, Prof. Bridel, an early worker on mosses and on diastases and metabolism of plants. *B. exaltata* is known as Grey Birch or STCN Scrub Ironbark. Fam. Euphorbiaceae.

Brombya. Named by Baron von Mueller after John Edward Bromby, D.D., first headmaster of Melbourne C. of E. Grammar School, South Yarra (not far from where Mueller himself lived). *B. platynema* is listed by Hyland, but Willis' "Dictionary of Flowering Plants and Ferns" and Burbidge's "Dictionary of Australian Plant Genera" agree in placing it in *Melicope*. Fam. Rutaceae.

Bubbia. Named by Van Tieghem (a French botanist of Dutch ancestry), presumably after a person named Bubb, which is an English surname. N.Q. has two species, both endemic, including *B. semecarpoides*, STCN Winter Beech, Australian Pepper Tree or Winterwood. Fam. Winteraceae.

Buchanania. Named by Sprengel after Dr. Francis Buchanan, M.D., F.L.S., F.R.S. (1762-1829). Born and died in Perthshire, Scotland. He became a surgeon for the East India Company in 1794, and was superintendent of the botanical garden at Calcutta, 1814-15. He sent many of his drawings of plants of India, Burma and Nepal to Kew Gardens, England. The N.Q. species *B. arborescens* is STCN Buchanania, Satinwood or Lightwood. Fam. Anacardiaceae.

Buckinghamia. Named by von Mueller after Richard Grenville, 3rd Duke of Buckingham and Chandos, who was Secretary for the Colonies, 1866-68; he had been M.P. for Buckingham, 1846-57; he was governor of Madras, 1875-80. The title became extinct on his death in 1889. *B. celsissima* is a monotypic endemic species, fam. Proteaceae.

Bursaria. Lat bursa, a pouch or purse (cf. *Capsella bursa-pastoris*, Shepherd's Purse). *B. tenuifolia* is the N.Q. species listed by Hyland. The common southern species is *B. spinosa*, STCN Sweet Bursaria or Blackthorn. Fam. Pittosporaceae.

Bursera. Named by Baron von Jacquin after Joachim Burser, a 17th century German botanist. It gives its name to family Burseraceae, included in which is the genus *Canarium*. *B. australasica* is now *C. australasicum*, Mango Bark, Carrot-wood, or STCN Brown Cudgerie.

Cadellia. After Francis Cadell (1822-79), a pioneer of River Murray navigation. In 1867 he explored a part of the Gulf of Carpentaria.

This small tree is now Guilfoylia monostylis, monotypic in fam. Simaroubaceae.

Callicoma. Gk kalos, beautiful (kallos, a beauty); kome, hair; alluding to the pretty, fluff-like, globular heads of flowers. C. serratifolia, now generally known as Callicoma, was the original 'wattle' of the early wattle-and-daub huts in the Sydney area. This common name is now universally used for species of Acacia (fam. Mimosaceae). Callicoma is in Cunoniaceae.

Callistemon. Gk kallos, beauty; stemon, a stamen; because the 'bottlebrush' flowers are formed by masses of coloured stamens. C. viminalis, STCN Drooping Bottlebrush or Creek Bottlebrush, occurs in N.Q. rainforests. Fam. Myrtaceae.

Callitris. Gk kallos, beauty; thrix, trichos, hair (although J.M. Black in "Flora of South Australia" derives the second element, -tris, from tres, tria, because the leaves are in whorls of three). Most speciea are in the dry inland, but C. macleayana, STCN Brush Cypress Pine or Stringybark Cypress, grows in the N.Q. rainforests. Fam. Cupressaceae.

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ESTURINE MOLLUSCS

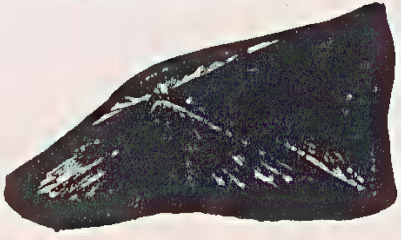
by BARBARA COLLINS

The mangrove and mudflat area would seem no place to collect shells, but it is surprising what material comes from them. Mangroves are not the easiest to shell amongst and one often has to combat sandflies, mosquitoes and lots of mud. The Cairns Inlet and Barron delta are rich in this fauna, but good results can be obtained from Cooya Beach across the Inlet from Port Douglas with a minimum of effort. The muddy sand here is quite firm and the mangroves on the southern end of the beach are easily accessible.

The largest of the mud dwelling molluscs belong to the family Potamididae and comprise four species, Telescopium telescopium, Terebralia palustris and sulcata and Pyrazus ebeninus. These are usually abundant in the mud amongst the mangroves. Cerithidea obtusa is a smaller lighter shell and is found high and dry on the tree stems above the mud.

Small varieties of Cerithidae live in adjacent muddy-weed areas, together with the bivalves Trisidos yongei (Twisted Arc shell) and species of Anadara (Cockle). Placuna placenta (Window Pane shell) lives a sedentary life on the mud flats, usually lying quite obviously on the surface. Isognomon ephippium (Mauve Pearl Oyster) lives in clusters attached by their byssus to the roots of the mangrove trees. Most of these shells are edible and comprise the bulk of debris in coastal Aboriginal middens.

Telescopium telescopium



Trisidos yongei

The roots of the mangrove trees are usually profusely dotted with *Nerita planospira* and *lineata*, the stems and leaves with *Littorina scabra*. The latter is a very variable shell and can be heavy or light, ribbed or smooth, banded or speckled, and the colour ranges from white through yellow, red, brown, to black.

Cooya Beach is also the home of *Murex permaestus*, a black shell with slightly frilled varices. The interior ranges from cream to purple. This mollusc feeds on the Toredo worm that invades decaying logs. I was very upset to see a large section of the mangroves cleared and heaped up, but returning some months later, I found huge numbers of the murex amongst the then rotting timber. They were apparently breeding and in one cluster I counted 14 shells. Sexual dimorphism is present, the male shell being much smaller than the female. These exposed shells were also eroded and smothered in oyster shells and as such useless for collection. Most mangrove dwelling species have eroded spires and *Nassarius olivaceus* is no exception.

In the drier reaches of the mangrove swamps live the Ear shells, so called because they resemble a human ear. There are many of these, but the most commonly encountered is *Cassidula angulifera*. *Ellobium aurisjudae* is another and is found under logs amongst the Cottonwoods which border the scrub.

None of these shells will be found elsewhere and are endemic to our mangrove swamps and river estuaries.

Nerita lineata

Littorina scabra

Cassidula angulifera

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THE NORTH QUEENSLAND NATURALISTS CLUB

Condensed from a Summary by Mr. S. E. STEPHENS, July, 1976.

Formed in Cairns in 1932 at a public meeting initiated by Dr. Hugo Flecker

Presidents: Dr. Flecker, 1932-45 and 1949-50; S.E. Stephens, 1945-48; J.M. Gray, 1949; A.A. Read, 1950-63; V.M. Reilly, 1964; A.J. Cassels, 1965-73 and 1975-76; W. Huddy, 1974.

Secretaries: J. Wyer, 1932-58; E.S. Fielder, 1959-60; A. Dockrill, S. Dean, C. Luppi, 1961-63; Mrs. M. Cassels, 1963-76.

Patrons: Dr. Flecker, 1951 until his death in 1957; Mr. J. Wyer, until he retired and left the district; and since 1973, Mr. S.E. Stephens.

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During 1933 the Club provided honorary guides to the reef at Green Island at weekends.

An annual Wild Nature show was staged during the early years, but was discontinued at the beginning of the second World War. In 1967 a display of Dangerous Plants attracted much interest at the Cairns Show. In 1969 a comprehensive display was exhibited for seven weeks in the Tourist Bureau.

Dr. Flecker collected botanical material throughout the North to establish the N.Q. Herbarium - named in his honour the Flecker Herbarium. This was housed for many years at the Edge Hill Botanic Gardens. The Club was fortunate in having Dr. L.J. Brass take charge of the Herbarium after his retirement in 1966. Subsequently it was handed over to the Forestry Department at Atherton so it could be more fully utilised by botanists and receive specialist care.

Field Days have been a popular aspect of Club activities over more than thirty years, and continue to be held each month.

Publications: "The N.Q. Naturalist" has been published at least two or three times a year ever since the inception of the Club. During the earlier years this journal was under the sole direction and editorship of Dr. Flecker. Then it was placed under the direction of a committee.

Specialist publications issued include: Checklist of N.Q. Orchids, original 1945, revised 1966; Checklist of N.Q. Ferns, 1946; Edible Plants of N.Q., 1948; List of Marketable Fish in the Cairns Area, 1945; List of Birds occurring in N.Q., 1949; List of Australian Dryopidae. A special issue of the journal in 1965 covered Chironex fleckeri and Chiropsalmus quadrigatus (Box Jellyfish).

An extensive library of books and periodicals has been built up and an exchange service is maintained with kindred clubs and scientific organisations.

The exchanges have led to many requests for assistance from research workers throughout Australia and overseas. One extensive project was the research into blindness caused from eating the fruit of the Finger Cherry, Rhodomyrtus macrocarpa. The Club arranged for the planting of an orchard plot from which fruit was supplied over a lengthy period to the Defence Standards Laboratories. A report on this research, "Finger Cherry Poisoning - Fruit or Fungus?", appeared in the journal in 1969. A wide range of other study material has been collected over the years in response to other requests.

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Note from Publication Committee: Henceforward, each Volume of "The N.Q. Naturalist" will comprise six Numbers.

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OBITUARY

The death occurred early this year of Sergeant Harry Ziegenfusz of Edmonton. This large and gentle policeman was an active member of our Club for many years until ill health forced his retirement. Sincere sympathy goes to his wife and family.

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The NORTH QUEENSLAND NATURALIST

CAIRNS

NATIONAL MUSEUM
14 OCT 1977
OF VICTORIA

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CONTENTS

A Spectacular Slug by Phillip H. Colman 2

Confirmation of Occurrence of Ghost Bat Macroderma gigas in Cape York Peninsula, Queensland by B.J. Marlow & W.E. Boles ... 3

Old Man Goanna by Rozanne Glazebrook 4

The Origin of Generic Names of Queensland Rainforest Trees Part V by James A. Baines 6

Two Unusual Bird Sightings by Roy Wheeler 7

Full Alert for the Giant African Land Snail by Phillip H. Colman 9

Each author is responsible for the opinions and facts expressed in his or her article.

A SPECTACULAR SLUG

by PHILLIP H. COLMAN*

One of the most fascinating native molluscs in Australia is the slug (or slugs) of the genus Triboniophorus, family Athoracophoridae. The Scientific names are long, but the slugs are mostly beautiful, and perhaps more important, completely harmless in gardens. Imagine a brilliant scarlet slug about 3" long; or a deep yellow slug bordered by scarlet; or a subdued rose-coloured slug. Whether these colour forms are different species or geographical races of the one species is not known, hence the (or slugs) above. Until more specimens from all parts of its range are studied, we won't know this answer.

Triboniophorus is a slug with a large ecological distribution. Specimens have been collected from the beautiful but harsh environment of the Hawkesbury River sandstone country round Sydney, to the equally beautiful, harsh and windswept top of Thornton Peak, north of Mossman, Queensland, to the lush and warm rainforests of mid-Queensland.

However, they are hard to find! Take an area, mix some rain and cloud and cold weather, don the cold weather gear and go out to watch patiently for slugs to climb trees. We don't know exactly what they feed on but suspect it is the micro-algae that covers the trunks and leaves of plants and rocks, and possibly the rich breakdown fauna and flora of the forest floor. However, recent observations indicate that Triboniophorus may not be as secretive, or as uncommon, as it has so far appeared to be. The writer observed feeding trails not unlike scribble marks on the smooth trunks of the 'blackbutts' of northern New South Wales. At first these marks, scrape marks in a left-right, left-right pattern leading up the trunk, were thought to be patterns of former insect explorations. A closer look, however, showed they were feeding tracks of a mollusc. The pattern of individual scrapes suggested molluscs, and a long search under shedding bark on trees and subsoil cavities at trunk bases yielded several specimens of the slug. Feeding marks on trees were very prolific. It is probable that this slug is quite a common species, but because of its cryptic habits is rarely seen.

If readers can observe their local trees and look for unexplained scrape patterns on trunks, mark the trees, and watch during wet weather, they will probably find these colourful slugs. I was able to see these feeding marks quite easily on tree trunks while driving at 50 kph.

Malacologists at any of the Australian museums would be only too pleased to receive live specimens of these slugs. Preserved, they lose their characteristic colour patterns, and it is necessary to photograph dorsal and ventral surfaces and match individual specimens to photographs. To ship, it is essential not to give too moist an environment. Slightly damp dirt, wood shavings, or the rotten interior of logs is good. Place this in a well sealed tin, with the slug, and post. Collecting details should be supplied separately, as many slugs and snails have a disconcerting habit of eating paper labels.

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* Dept. of Malacology, Australian Museum, Sydney.

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CONFIRMATION OF THE OCCURRENCE OF THE GHOST BAT *Macroderma gigas*, (CHIROPTERA : MEGADERMATIDAE) IN CAPE YORK PENINSULA, QUEENSLAND.

by B.J. Marlow * & W.E. Boles **

NATIONAL MUSEUM
14 OCT 1977

* Department of Mammalogy   The Australian Museum, SYDNEY, N.S.W. Australia

** Department of Ornithology   The Australian Museum, SYDNEY, N.S.W. Australia

The Australian Ghost Bat, *Macroderma gigas* is widely distributed in the tropical regions of Australia and details of its range in Western Australia are given by Douglas (1967) and in the Northern Territory by Parker (1973). While records of this bat from the Rockhampton district of Queensland are plentiful, there is a paucity of records from further north in Queensland and especially from Cape York Peninsula. Dwyer (1968) describes the discovery of isolated living specimens and mummified remains from four localities in the southern part of Cape York Peninsula in the vicinity of Chillagoe, Lappa Junction, Mount Carbine and Helenvale but no specimens seem to have been collected at the most northerly point - Helenvale. The only evidence of the existence of *M. gigas* there would appear to be the mummified carcase of this bat which was displayed in the bar of the local hotel "The Lion's Den".

It is now possible to confirm the occurrence of *M. gigas* at Helenvale, Cape York.

During an investigation of the fauna of rain forests in North Queensland being conducted jointly by The Australian Museum and The Queensland Museum, mist nets were erected in Dry Gallery Rain Forest fringing the Annan River about 2 km South of Helenvale Telegraph Office. The location of this site was 15°45'S 145°13'E and its altitude was 150 metres.

On the night of 28/29 November 1975 W. Boles captured five adult *Macroderma gigas* (3 ♂♂ + 2 ♀♀) in a mist net set parallel to the Annan River and about 15 metres from its bank. Three of these bats were liberated and two (1 ♂ + 1 ♀) were retained as spirit specimens in the collection of The Australian Museum.

The following data are referable to these specimens

Reg No.	Sex	Head & Body mm	Hindfoot mm	Ear mm	Forearm mm	Remarks
M10189	♂	101	28	48	102	Testes large
M10190	♀	107	25	48	102	Lactating

It was suggested by Dwyer (1968) that *M. gigas*, in the vicinity of Helenvale, would find adequate refuges in a large mass of granite boulders called "Black Mountain" situated about 5 km to the west.

The capture of these ghost bats confirms the existence of a colony in the vicinity of Helenvale in Cape York peninsula and corroborates Dwyer's suggestion that this bat exists in that locality.

The allocation of funds from the Australian Biological Resources Survey Interim Council to enable the Rain Forest Survey to be carried out is gratefully acknowledged.

References

Douglas, A.M. 1967. - The Natural History of the Ghost Bat, *Macroderma gigas* in Western Australia. W. Aus. Nat. 10 (6):125-138.

Dwyer, P.D. 1968. - New Records of the False Vampire Bat in Queensland. Helictite 6 (2):36-40.

Parker, S.A. 1973. - An Annotated Checklist of the Native Land Mammals of the Northern Territory. Rec. S. Aus. Mus. 16 (11):1-57.

-oOo-

OLD MAN GOANNA

by ROZANNE GLAZEBROOK

Coming from Tasmania, I had seen the usual assortment of tiger snakes, copperhead and whip snakes, skinks and blue tongue lizards, but none of these thrilled me as did my first sighting of a sand goanna when on a trip to Cape York in September, 1975. He was enormous and very beautiful.

We camped at the Archer River, 40 miles north of Coen, and John had gone for a walk along the river bank. Suddenly he returned, very excited, and said he had seen a sand goanna. He rushed to get his camera. I grabbed the binoculars and set off after him.

The goanna was digging in the sand, and we approached very cautiously from the opposite side of the river bank. As we drew near, he stopped digging and climbed onto a large boulder behind him and sat there looking around. We sat quietly under a tree and waited. After a few minutes the goanna climbed down from the rock and went back to his hole to dig again.

He dug with his strong front claws, about five digs with one foot and then with the other. Occasionally he seemed to sense us, would stop digging, stand on his hind legs and gaze around. We remained very still and must have posed no threat, because he soon went back to work. We couldn't see clearly what he was doing, but every 5-10 minutes he would lift his head from the hole and gulp two or three times, as if he were swallowing something. We thought he may have been eating some sort of insect or eggs. I had read that goannas dig holes in which to lay their eggs, also in open country as burrows.

The gulping procedure was repeated four times in all. After 20 minutes our friend left the hole and walked slowly away over the sand dunes. We followed his tracks and soon came upon him sitting quietly on a log basking in the sun. We took some photos and left him undisturbed. The hole we found to be into the side of the sand bank, about 2½ feet deep. He had made no attempt to cover it.

The sand goanna, Varanus gouldii, belongs to the family Varanidae. A common species of Australian goanna, he is found throughout the continent (not Tasmania), from the wet coastal areas to the desert. Size averages 3-4 feet, but may grow to 5 feet. Colour varies with habitat, from almost black in South West Australia, to a brightly coloured desert form.

Our Archer River goanna was approximately 3 feet long and blended beautifully with his sandy surroundings. He had strong muscular limbs, long sharp curved claws, and a powerful tail. His head was pointed and on his face was a dark streak, edged above and below with white, from the eye to the neck.

Unlike a skink, a goanna cannot regrow its tail. Goannas feed on insects, lizards, birds, mammals and snakes. A legendary plant, supposedly eaten by goannas to neutralize the snake venom, was immortalized in Banjo Paterson's poem, "Johnson's Antidote".

Other legends which surround the sand goanna are also very interesting. Goanna fat or oil is said to have incredible powers of penetration, it can even pass through glass. Bites inflicted by goannas mysteriously break out annually or every seven years. According to one legend, they never completely heal. This has been disproved, but bites may not heal properly because of secondary infection caused by decayed food and bacteria in the wound from the animal's mouth.

The sand goanna rarely climbs trees, unlike his relation, the tree climbing goanna Varanus varius, unless as a means of escape when threatened. He can move extremely fast when he has to, is mild tempered, but can stage a terrifying bluff display by standing on hind legs, swelling his throat pouch and hissing at his opponent, shooting his forked tongue in and out.

Our goanna didn't seem to mind us. In his isolated habitat he probably had not been previously threatened by humans. With his tough leathery skin with scales lying up against one another, instead of overlapping like those of some other lizards and snakes, the goanna appears to be an ageless creature.

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THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES PART V

by JAMES A. BAINES.

Note: STCN = Standard Trade Common Name
PCN = Preferred Common Name (likely to become the standard name).

* * * * * * *

Brassaia. This genus was not named after Banks' collector William Brass (see Part IV), but after Prof. Samuel Brassai of Klausenburg, now Cluj, in Romania. (Brassia, a large genus of tropical American orchids, honours Wm. Brass, the African collector; because this name was already occupied, Dr. George Gillett used Lenbrassia to commemorate Leonard Brass of N.Q.).

Calophyllum. Gk kalos, beautiful; phyllon, leaf. N.Q. species are C. inophyllum, Satin Touriga, Alexandrian Laurel or STCN Beach Calophyllum; C. australianum, STCN Blush Touriga or Pink Touriga; and C. costatum, STCN Red Touriga or Satin Mahogany. Fam. Guttiferae.

Canarium. Francis gives the derivation as 'from Canari, a Malayan name', but there is no C in the Malay language. Several species, from which fragrant resins are obtained, are native to India and the generic name could have come from Kanara, a district in Mysore State. Q. species include C. australasicum (see Bursera, Part IV), STCN Brown Cudgerie; and C. muelleri, STCN Scrub Turpentine or Q. Elemi Tree, elemi being the name of the resin. C. commune is called Kanari Nut or Pili Nut in the Phillipines.

Canthium. From Kanti (spelt Canti by Bailey), the name of one species in Malabar; a species native to India and Sri Lanka is known as Ceylon Boxwood. Two species are listed by Francis. Fam. Rubiaceae.

Capparis. Greco-Latin name for the Caper-bush, C. Spinosa (from Perso-Arabic kabar), capers being the pickled flower buds of this plant. C. arborea, Native Pomegranate, is a N.Q. species reaching small tree height, as does C. mitchellii, Native Orange, of the dry inland. Fam. Capparidaceae.

Cardwellia. Named by Mueller in 1865 after Edward Cardwell (1813 - 1886), Secretary for the Colonies, 1864 - 6, during which time he ended transportation of convicts; he became Viscount Cardwell of Ellerbeck in 1874. C. sublimis, Northern Silky Oak (called also Gold Spangled Wood in Bailey), is a monotypic species, endemic in n.e. Q. Fam. Proteaceae.

Cargillia. Named by Robert Brown after James Cargill (flor. 1603), a medical man of Aberdeen. He studied at Basle under Caspar Bauhin (after whom the genus Bauhinia was named) and wrote on algae. C. australis is now in Diospyros, related to Myrtle Ebony of Q. and to true Ebony. Fam. Ebenaceae.

Carnarvonia. Named by Mueller after Henry Howard Molyneux Herbert, 4th Earl of Carnarvon (1831 - 1890), Under-Secretary and then Secretary for the Colonies between 1858 and 1874. His title comes from Carnarvon, Wales (in Welsh, Caer-yn-Arfon). C. araliifolia, Red Oak or STCN Caledonian Oak, is monotypic, endemic in n.e. Q. Fam. Proteaceae.

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TWO UNUSUAL BIRD SIGHTINGS

by ROY WHEELER, Melbourne, Vic.

During a visit to North Queensland by Mrs. Wheeler and me in Oct. - Nov. 1976, I made two rather unusual bird observations. The first was on the Esplanade at Cairns on October 26. That day, after a trip to Port Douglas, Mossman Gorge National Park and Hartleys Creek with members of the N.Q. Naturalists Club, I was sitting on a seat on the Esplanade opposite our motel and taking grass seeds out of my socks when I noticed a strangely coloured bird feeding in the mud on the tidal flat. At first sight it looked like a small egret which had mud thrown over it. I returned to the motel for my binoculars and found that the dark patches on the bird were dark grey feathers. It was after 6 p.m. and starting to get dark and I wrote down as much detail as possible, because in many cases of such sightings the bird is not seen again. The mainly white bird was about the size of a Plumed Egret but the colour of the bill was different as was the shape. The dark coloured feathers were on the back, under the wings, on the neck and head, giving the bird a most piebald appearance. The back feathers hung as plumes over the wings and sides and had a rusty colour about them. That evening I contacted Bill Felton, John Crowhurst and others, and the following evening we all saw the bird on the Esplanade in exactly the same place. In our discussion later, we found that books did refer to the Reef Heron at times appearing in a spotted plumage. Peter Slater in "A Field Guide to Australian Birds", page 218, under Reef Heron states: "Medium sized heron, all white, or all grey, or spotted grey and white." In "Birds of South-West Asia", this spotted appearance is also mentioned. None of the observers in Cairns had seen a Reef Heron in this plumage before and I imagine it is somewhat rare. My grateful thanks to the members of the N.Q.N.C. for their help in solving the problem.

Second unusual sighting in next issue.

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FULL ALERT FOR THE GIANT AFRICAN LAND SNAIL!

On 23rd April, 1977, Mr. Clyde Coleman, President of this Club, sent me a large specimen of a land snail for identification. It turned out to be a specimen of Achatina fulica Bowditch, the Giant African Land Snail, and it came from a residence at Gordonvale, some 20km south of Cairns. This introduced species has the possible potential to cause as much damage, in terms of crop loss and environmental damage, as the rabbit, although it would be restricted in its spread to the higher rainfall areas and temperature zones of Australia. It has so far colonised much of the Indo-Pacific region.

The original specimen that I received was collected by the Hardwick children, students at Aloomba school, who had visited Gordonvale. Thanks to their curiosity and to the concerned interest of their teacher, Mr. Bill McClintock, the specimen was given to Mr. Coleman and thus forwarded to me in Sydney. I immediately rang the alarm bells to quarantine officers in Sydney, Brisbane and Canberra, and within an hour Cairns officials were on their way to the site. Since that day everything possible has been done to eradicate this outbreak, and so far results have been very promising.

We may ask how or when this species was able to get to Gordonvale. The answer is probably lost. However, the lesson learnt is that the inquiring mind of a school child may have saved this country millions of dollars in crops lost, plus an equal saving in value to our native forests. It shows us yet again that the non-professional man-in-the-street can add immeasurably to our knowledge if he or she is prepared to observe, compare, and communicate with those in a position to act, be they Quarantine, CSIRO or Agricultural Department officers, museum personnel, or your friendly local naturalist.

By Phillip H. Colman, Dept. of Malacology, Australian Museum, Sydney.

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NOTE: Annual subscriptions now due... Thank you!

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CONTENTS

Canopy Collecting for Molluscs by Phillip H. Colman ... 2
Two Unusual Bird Sightings (cont.) by Roy Wheeler... 3
An apparent case of Altitudinal Displacement between two Frogs by Gregory V. Czechura ... 4
Conus textile by Barbara Collins 7
Origin of Generic Names of Queensland Rainforest Trees Part VI by James A. Baines 8

OBITUARY: Older members note with regret the passing of Mr. Stan. Dean in October, 1977. Mr. Dean served for a time as both Secretary and Treasurer of our Club and will be well remembered for his cheerful personality.

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CANOPY COLLECTING FOR MOLLUSCS.

by PHILLIP H. COLMAN*

In a previous article I discussed very briefly the problems of collecting landsnails (treesnails) in forest canopies. The tropics in general throughout the world are richer in arboreal species of molluscs than elsewhere, but inaccessibility to this 'niche' has precluded any indepth studies of tree dwelling molluscs. Below I wish to suggest ways in which readers could help in our understanding of canopy dwellers, and discuss some of the species that might be encountered. Remember that museum personnell spend most of their time in offices, whether they like it or not, and amateur collectors can help enormously in the understanding of our Australian fauna.

Landsnails can be broadly divided into two groups, operculate and nonoperculate. (An operculum is the "door" attached to the foot that closes off the animal from the outside world.) Most arboreal species are operculate in Australia. Moisture is a virtual pre-requisite to the survival of molluscs, and an operculum is the door that keeps in that key to life. Ground dwelling species can utilise moist niches in dry spells. Arboreal species must somehow attach themselves to their exposed substrate, and with the aid of an operculum, plus a mucus that sticks them to the tree or leaf, they survive to multiply.

Most arboreal species known so far have been collected after they have been dislodged by the elements, by wind or rain, and fallen to the ground, or when they die and fall. This is still a good way to collect them, although it is perhaps an uncomfortable one, as the collector needs to be in the forest during the storm to make best use of its services. The writer has utilised the destructive habits of the timber cutter in the same way. A large tree crashing down will dislodge all but the most tenacious snail. Those that survive will immediately head for the nearest tree or shrub for the time being, and often species more at home 60 feet up will be found on saplings 10 feet high. A good shake of larger saplings in the vicinity of a fallen giant will often produce interesting results.

Another method of collecting canopy species is to band the trees of a selected area with some form of band that will tempt climbing snails to hide below the band, much the same way that garden snails tend to congregate under the weather sill of a house window. For small species one-sided corrugated cardboard is good, with the corrugations against the trunk. Floppy hessian or other material, such as ragged strips of coconut palm 'weave', could be used for larger species. Fallen snails dislike climbing over this sort of surface and will tend to stay below it. For those who are entomologists as well, this method is also excellent for attracting the pupating larvae of some lepidoptera, such as the Lycaenidae, and other insects.

There could be other canopy collecting methods. I would always be pleased to learn of them. The ultimate way to learn of canopy fauna of course, is to build accessible tree houses and access paths, but time, effort and cost usually preclude this.

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* Dept. of Malacology, Australian Museum, Sydney.

NA
21 JUN 1978
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TWO UNUSUAL BIRD SIGHTINGS (cont. from last journal)

by ROY WHEELER, Melbourne, Vic.

The second unusual sighting of our visit to North Queensland in 1976 was at Weipa on November 2. Michael O'Reilly had told me about a wader feeding on the edge of a sullage dam near where the nursery staff were planting trees, and his description fitted the Common Sandpiper. In the evening I scrambled up the steep bank of the dam, clamped the binoculars on the bird and was immediately struck by its very green coloured plumage. It had all the appearance and charactaristics of the Common Sandpiper, except that it was a rich green coloured bird. Lacking books for wader identification and sure that the colour could not be wrong, I wired the Queensland Ornitholigical Society and my old friend, Mr. Fred Smith of Melbourne, saying I had found the Green Sandpiper. However a letter from Mr. Smith, dated November 11, rather confirmed that the green colour was caused by the sun's rays on the plumage of an immature bird. He told me of several occasions when he had been caught in this way. Twice it was with young Wood Sandpipers, one at Kuranda on the Barron River and the other near Bourketown. The calls of these birds confirmed them as Wood Sandpipers in spite of their green plumage. Again, near Bourketown, a bird with such a rich green plumage almost convinced him he was on to a strange species, but after several minutes he was convinced that he was watching an immature Curlew Sandpiper, turned green by the tropical sunlight. He concluded by saying that at times in southern Victoria he had seen immature Curlew Sandpipers with a greenish wash in the dark upper parts.

After further discussions with Mr. Smith, there is now no doubt that the bird we saw on the sullage dam at Weipa was an immature Common Sandpiper turned green by the tropical sunlight. Mr. Smith also advises that the Green Sandpiper actually is not green and the Purple Sandpiper of Europe is not purple. Makes it rather confusing for the bird watchers. Again my thanks to Michael O'Reilly and Jim Leggate of Weipa for showing us to perfection this strange coloured bird and to Mr. Fred Smith for solving the problem.

-oOo-

AN APPARENT CASE OF ALTITUDINAL DISPLACEMENT BETWEEN TWO FROGS OF THE GENUS SPHENOPHRYNE (ANURA : MICROHYLIDAE) IN NORTH-EAST QUEENSLAND.

by GREGORY V. CZECHURA
WOOTHA ROAD, MALENY. Q. 4552.

INTRODUCTION

During the period December 1976 - January 1977, field investigations into frogs of the pelodryadid genus Nyctimystes were undertaken in north-east Queensland. Concurrent with these studies, were the recording of observations made on reptiles and amphibians sympatric with Nyctimystes in rainforest. The following report deals with a possible case of altitudinal displacement involving two microhylid frogs of the genus Sphenophryne.

LOCATION AND DESCRIPTION OF AREA

Observations were made on the eastern escarpment of the Atherton Tableland in the vicinity of Mt. Bartle Frere, Bellenden Ker Range (17°23', 145°48').

An altitudinal transect was conducted along this escarpment on the night of 29 December, 1976. This transect commenced at approximately 480m. asl, at one of the streams forming the headwaters of the Russell River, and terminated at an undefined point, approximately 720m. asl. The survey was commenced at sunset and was completed at 2230 hours on the same night.

The vegetation along the transect consisted of three forms of rainforest. Vegetation data is taken from Tracey and Webb (1975, 1976).

a. Complex mesophyll vine forest (1a)
b. Mesophyll vine forest (2a)
c. Complex mesophyll vine forest (1b)

Methods

Regular stops were made during the traverse. Frog choruses were noted (if present), then identification of species composing the chorus was undertaken on the basis of call recognition and location of calling animals. Several of these choruses were recorded on a portable cassette-tape recorder for reference purposes.

Approximate elevations have been calculated by reference to the Topographic Survey 1:100,000 map, sheet 8063 (Edition 1) Series R631.

Taxonomy

The two taxa observed in the field belong to the microhylid genus Sphenophryne. However, the taxonomy of Australian microhylids is unclear as both intraspecific and interspecific variations have not been fully reviewed. Using the data contained in Zweifel (1962, 1965) and Cogger (1975) the taxa observed have been tentatively placed in Sphenophryne pluvialis Zweifel and Sphenophryne fryi Zweifel.

Field Observations

Sphenophryne were regularly encountered throughout the forest. Males were found calling from under debris, in leaf litter and amongst the roots of trees.

The two forms were easily distinguished on the basis of colouration and call. The call of S. pluvialis was a loud, high-pitched, wavering note while the call of S. fryi consisted of a series of loud, high-pitched notes.

At the lowest point of the transect (approx. 460m. asl.) only S. pluvialis was encountered. The vegetation in this area was complex mesophyll vine forest (1a) (this frog had been previously encountered during December 1976 in similar forest at 120-200m. asl. on the western slopes of the Bellenden Ker Range). S. pluvialis was regularly noted in choruses until about 580m. asl. Between (560-580)m. asl. it was found with S. fryi. There appeared to be a relatively narrow band where the two frogs coexisted.

The width of this band ranged from 30-50 metres approximately. Both frogs were regularly heard calling from within the band, which appeared to extend along the escarpment, rather than forming an isolated, discrete area. The vegetation type in this area was mesophyll vine forest (2a).

Above this band only S. fryi was recorded. It was very common in complex mesophyll vine forest (1b) - mesophyll vine forest (2a) at altitudes greater than 580m. asl. S. fryi was later recorded at numerous localities on the Atherton Tableland.

Other frogs recorded during the traverse were, Nyctimystes sp., Litoria rheocolus, L. nyakalensis, L. infrafrenata, L. lesueuri, Taudactylus acutirostrus, Cophixalus ornatus and Cophixalus sp. (cf. exiguus).

Discussion

Specific altitudinal distributions have been noted in African (e.g. Schmidt and Inger 1959; Schiotz 1967), Neotropical (e.g. Savage and Heyer 1969; Myers 1969; Duellman 1970) and Papuan frogs (e.g. Tyler 1968; Menzies 1975). I refer the reader to these papers for discussion of the factors producing such distribution patterns.

The relatively abrupt interface between the two Sphenophryne may reflect a change in environmental tolerance and/or competition between S. fryi and S. pluvialis. Although further studies are required to investigate the interaction, the distribution pattern exhibited here parallels a case noted by Diamond (1975) involving birds in the New Guinea area. He pointed out that where the parrot Vini placentis existed in an area with a congener "V. placentis is confined to low elevations, the congener to high elevations, and there is little or no altitudinal overlap elevations."

Further studies on this Sphenophryne interaction should involve,
a. quantification of environmental parameters, and
b. determination of spatio-temporal relationships
between S. fryi and S. pluvialis.

Acknowledgements

I wish to thank my wife Robin for her assistance in the field. Mr. G.J. Ingram, Curator of Amphibians, Queensland Museum for his aid in preparation of the paper. Olinda Confessore for typing the manuscript.

REFERENCES

COGGER, H.G. (1975) The Reptiles and Amphibians of Australia. Reed, Sydney.

DIAMOND, J.M. (1975) Assembly of species communities in Diamond, J.M. and Cody, M.L. (eds), Ecology and Evolution of Communities. University of Harvard Press, Cambridge.

DUELLMAN, W.E. (1970) The Hylid Frogs of Middle America. 2 Vols. Museum of Nat. Hist. Uni. of Kansas, Lawrence.

MENZIES, J.L. (1975) Handbook of Common New Guinea Frogs. Wau. Ecology Institute, Wau.

MYERS, C.W. (1969) The ecological geography of cloud forest in Panama. Amer. Mus. Novit. 2396: 1-52.

SAVAGE, J.M. and HEYER, W.R. (1969) The treefrogs (family Hylidae) of Costa Rica : diagnosis and distribution. Rev. Biol. Trop. 16(1) : 1-127.

SCHIOTZ, A. (1967) The treefrog (Rhacophoridae) of West Africa. Spoilia zool. Mus. haun. 25 : 1-346.

SCHMIDT, K.P. and INGER, R.G. (1959) Amphibians exclusive of the genera Hyperolius and Afrixalus. Explor. Parc nat. de l'Upemba 56 : 1-264.

TRACEY, G.J. and WEBB, L.J. (1975) Key to the Vegetation of the Humid Tropical Region of North Queensland. C.S.I.R.O. Long Pocket, Brisbane.

TRACEY, G.J. and WEBB, L.J. (1976) Maps of the Vegetation of the Humid Tropical Region of North Queensland. C.S.I.R.O. Long Pocket, Brisbane.

TYLER, M.J. (1968) Papuan frogs of the genus Hyla. Zool. Verhand 96 : 1-203.

ZWEIFEL, R.F. (1962) A systematic review of the microhylid frogs of Australia. Amer. Mus. Novit. 2113 : 1-40.

ZWEIFEL, R.G. (1965) Revisionary notes on Australian microhylid frogs of the genus Sphenophryne. Amer. Mus. Novit 2214 : 1-9.

CONUS TEXTILE (Linnaeus 1758)

by BARBARA COLLINS

This mollusc can be an attractive aquarium subject; ours was kept successfully for about nine months. I feel it may have died from starvation as the only other molluscs left for it to feed on were a pair of *Murex brunneus*, which are pretty well armour plated.

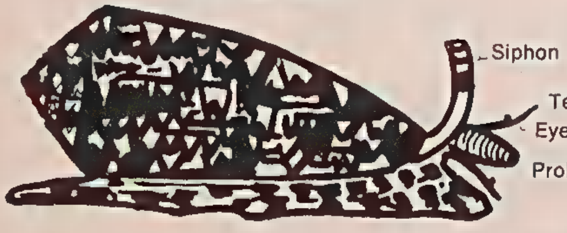
Cones are largely a tropical waters inhabitant and the majority of species come from the Indo-Pacific region. Environmental conditions play a great part in the development of specimens, and comparison shows coastal mainland specimens to be much darker in colour than those from a coral reef. Colour pattern can also be diverse, and water depth has a bearing on the shell shape and thickness. Cones are carnivorous and fall into three categories: piscivorous (fish feeders - dangerous to man); molluscivorous (mollusc feeders, including other cones - also dangerous); vermivorous (marine worm feeders). The Textile is in the molluscivorous class and has caused injury and reported death to man.

The radula tooth of the cone has been modified into a venomous dart which is ejected through the proboscis to paralyse or kill its victim. The shell should not be handled after collection because the animal becomes very active and can extend its flexible proboscis containing the dart beyond the shoulder of the shell. The shell should be picked up only from the broad end and should not be put in a pocket or close to your person. The shells are usually found under rocks or coral slabs and the colour pattern is easily distinguished through the thin periostracum.

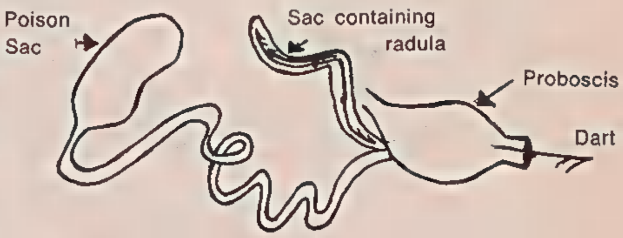
Our Textile was responsible for the deaths of *Conus parvulus*, *C. capitaneus* and a *C. magus*. The last was a surprise as *C. magus* is piscivorous and I would have thought more venomous than *C. textile*. A comparison between the venom sacs of *C. magus* and *C. terebra* showed *C. magus* to be almost four times that of *C. terebra*. The Textile also killed and partially ate our two *Phalium areola*.

The animal of *C. textile* is quite striking. Basically mottled with reddish brown, it has black, white and red banding on its siphon, a suitable 'do not touch' signal.

TEXTILE CONE



POISON APPARATUS



THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES Part VI

by JAMES A. BAINES

Note: STCN = Standard Trade Common Name
PCN = Preferred Common Name (likely to become standard name).

* * * * * *

Cassia. Gk kassia, name for a leguminous plant, probably senna (species of Cassia from the dried leaves of which comes the well-known pharmaceutical product). Q. has a number of species. Fam. Caesalpiniaceae.

Castanospermum. Gk kastanos, chestnut tree; sperma, seed; because the large seeds resemble chestnuts. *C. australe*, STCN Black Bean or Bean Tree, is also known as Moreton Bay Chestnut. Fam. Papilionaceae or Fabaceae (*Faba*, bean).

Castanospora. Gk kastanos, chestnut; spora, seed or spore; probably in allusion to the downiness of the inside of the pericarp (outer covering of the capsule) reminding Mueller, who named it, of chestnuts. Fam. Sapindaceae.

Cedrela. Diminutive of Lat cedrus, cedar (from Gk kedros). *C. toona* var. *australis* is now *Toona australis*, *Cedrela* being confined to the cedars of Mexico and tropical South America, with *Toona* for the Asian and Australian relatives. They are in fam. Meliaceae and related to the White Cedar, *Melia azedarach* var. *australasica*.

Celtis. Gk keltis, name for another tree of unknown identity (according to 'A Gardener's Dictionary of Plant Names' by Smith & Stearn); or from Lat celtis, an African species of lotus (according to 'A Sourcebook of Biological Names and Terms' by Jaeger. The Q. species is *C. paniculata*. A North American species, *C. occidentalis*, is Hackberry or Beaverwood, another is Sugar-berry. Fam. Ulmaceae.

Ceratopetalum. Gk keras, horn (genitive keratos); petalon, petal; because in one species the petals resemble horns. *C. succirubrum*, STCN Satin Sycamore or Blood-in-the-Bark, and *C. virchowii*, STCN Pink Sycamore or Dogwood (one of the many quite unrelated spp. of plants called by this misleading common name in Australia) are N.Q. species. *C. apetalum*, STCN Coachwood or Scented Satinwood, of N.S.W. reaches Q. in the Macpherson Range. *C. gummiferum* is the N.S.W. Christmas Tree. Fam. Cunoniaceae.

Cerbera. Named by Linnaeus after Cerberus, the 3-headed dog that guarde the entrance to Hades beyond the River Styx; its bite was poisonous, the fruits of these trees being narcotic and poisonous. Two N.Q. species are both known as Grey Milkwood. Fam. Apocynaceae, the type genus of which is *Apocynum*, Dogbane (Gk apo, away; kyon, dog; because poisonous to dogs).

Choricarpia. Gk choris, separate, apart; karpos, fruit; alluding to the individual fruits which, though occurring in heads, are more or less free from each other. *C. subargentea*, STCN Ironwood Box or Giant Ironwood, was placed in *Syncarpia* by C.T. White but transferred to Domin's *Choricarpia* by Sydney botanist L. Johnson in 1962. Fam. Myrtaceae.

Chrysophyllum. Gk chrysos, gold; phyllon, leaf. *C. antologum*, Brown Pearwood or Silky Hornbeam, *C. pruniferum*, Plumwood, and *C. chartaceum* are Q.'s 3 species, all with STCN Plum Boxwood. Fam. Sapotaceae.

Cinnamomum. Gk kinnamomon, the cinnamon tree. The English word cinnamo shows change of second m to n, due to the speech tendency evident in the common mispronunciation of cardamom as cardamon and pantomime as pantomine. Q.'s species are known as kinds of sassafras and camphorwood. Fam. Lauraceae.

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The NORTH QUEENSLAND NATURALIST

CAIRNS

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CONTENTS

Land Snail Life Histories by Phillip H. Colman 2
A Further Note on Conus textile by Barbara Collins 3
Aristolochias and Butterflies by Keith Kennedy 3
A Spider Aberration - Linus fimbriatus by Clyde Coleman 5
With the 'Birdoes' to Georgetown by John Crowhurst... 6
Origin of Generic Names of Queensland Rainforest Trees Part VII by James A. Baines 8

Each author is responsible for the opinions and facts expressed in his or her article.

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LAND SNAIL LIFE HISTORIES.

by PHILLIP H. COLMAN.+

Our knowledge of the life histories of Australian land snails and slugs is virtually non-existant. Some work has been done on the life cycle of a large N.S.W./Sth. Qld. species Hedleyella falconeri, and a little work is currently in progress on some species of the carnivorous family Rhytididae. But other than that, to the author's knowledge, no work is in progress on any other species, and little work has been published of past research. This sort of research is difficult to do by professional malacologists, in our museums or elsewhere, but offers unlimited scope to the amateur, who is on the spot - and much better equipped for that reason - to not only pursue a potentially fascinating project, but at the same time to add significantly to our knowledge of Australia's fascinating terrestrial molluscs.

I live in Sydney and work at the Australian Museum. It is therefore extremely difficult to bring back some specimens of land snails from, say, 200 miles north of Sydney, recreate the natural environment in the lab, and watch what happens over the next year or so. My time is taken up with general curatorial matters, enquiries, administrative calls etc. By the time I get home I'm not exactly rearing to start studying shells! However, a person who happens to live within walking distance of say, a rainforest or whatever, could very well recreate quite closely the same conditions of that rainforest in his house, in miniature fashion, such as in an aquarium. This artificial environment would not be an exact replica of the real thing, but factors such as temperature and altitude would be automatically the same, and the leaf litter or whatever making up the normal structural environment would be accessible within walking distance. It is not much use bringing live species home from a Eucalyptus globulus dominated environment 200 miles away and trying to create a natural environment in the aquarium with E. citriodora, just because that Eucalyptus species happened to be accessible at all times.

Land snails need moisture, calcium, shelter and food. In an aquarium all four needs can be met fairly easily. Moisture in the form of a mist spray of water when necessary; calcium by collecting a few dead shells and crushing them to add to the leaf litter, plus soil from their natural habitat; shelter by the aquarium; and food....a bit more difficult and depending on species. We DO know, from available evidence, that no native slug or snail is a live-herbivore. We DO know also that most species seem to eat decaying plant matter. Some species are carnivores, feeding on other species of molluscs, worms, etc., plus others of their own kind. But we DON'T know EXACTLY what 99% of the rest really do eat. Most, we think, are feeders on detrital matter, consuming decaying plant matter such as leaf litter, moulding logs or fallen forest fruit, or algae and fungi. Leaves and trunks of most tropical plants carry quite a load of hitch-hikers in the shape of algae and moulds and it is presumed the many arboreal snail species scrape this off the leaves without eating the leaves themselves.

What the intelligent naturalist-observer could do to increase our very limited knowledge of the food preferences of our native molluscan fauna, plus probably the species' breeding habits, is to keep two to several in a terrestrially planned aquarium, and supply them with whatever you can lay your hands on that typifies, to you, their natural environment. If they are found on tree trunks (live ones) or leaves of trees or shrubs, your task may be difficult; but the results would be that much more rewarding.

As well you can ask the various questions we continuously ask each other, such as: what kind of eggs does it lay, how many, when, where, and how often? Has it specific food preferences or does it seem omnivorous? Is it carnivorous, and if so does it only prey on other molluscs of does it eat other animals or dead animal material? And if

NATIONAL MUSEUM
-7 SEP 1978
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a carnivore does it actively chase prey by following up tracks or is it purely opportunistic? How long do juveniles take to reach maturity, and how long do they live? Some of the answers you get will of course differ from those results obtained by observing snails in a natural instead of artificial environment, but still those answers would be invaluable, and many of them would be impossible to get any other way.

Remember that moisture is essential to the well-being of snails and especially slugs. A small atomizer is ideal for spraying an aquarium.

Write your observations up and get them published in The North Queensland Naturalist or some other publication, or send them to a museum curator of molluscs so that he can publicise your findings.

[+] Dept. of Malacology, Australian Museum, Sydney.

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A FURTHER NOTE ON CONUS TEXTILE (LINNÆUS 1758)

by BARBARA COLLINS.

One night we were fortunate to witness the fascinating spectacle of Conus Textile feeding. Previously we had just noted the empty shells of various Mitra, Olividae and Cypraea cast away on the surface of the sand.

This specimen, taken from Cape Tribulation, is approaching two years in captivity. When collected it attacked several olives and "spears" about 3 mm. in length could be seen protruding from the anterior end of the shell. These we examined under a microscope, not very successfully, but we could see some detail.

The cone spends much of its time buried beneath the sand. When a new batch of "food" was added late one night, it instantly emerged and cruised about, sensing for the prey. An unfortunate olive, Oliva oliva (L. 1758), was not quick enough to right itself and burrow, and the cone moved right up onto the olive and injected a dart; it then lifted itself and "blew" the venom cloud away by "exhaling" through its syphon. The cone then moved over the olive and in a short time had consumed it.

With hunger pangs by no means satisfied, the cone then searched out other prey. It ignored several other sluggish olives and moved quickly towards a small stromb, Strombus labiatus, which had overturned and was frantically trying to right itself. As the cone approached, the kicking of the stromb's foot became even more frantic and the cone was held at bay, but managed to get opportunities to insert darts. We definitely saw strong muscular contractions three times before it moved away from the stromb and waited. It took several seconds for the stromb's movements to subside, then the cone moved over to devour it. We watched for falf an hour before turning in. In the morning the shell was empty. The cone had vanished and we didn't see it for almost a fortnight, and then it by-passed food offered. The evidence of later rampages is apparent and perhaps the cone is busy enlarging its shell.

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ARISTOLOCHIAS AND BUTTERFLIES

by KEITH KENNEDY, Townsville.

Some time ago an appeal was made to the citizens of Cairns to grow the climbing plant aristolochia in their gardens to encourage the increase of the big Birdwing butterflies, and so add another attraction to the city.

There are several species of aristolochias in North Queensland, also two cultivated in gardens, which were imported from South America. The latter are known as Dutchman's Pipe because of a resemblance of the flowers to the old-fashioned curved pipe once popular in Holland and Germany.

The aristolochias native to Australia have smaller flowers. In "Queensland Flora", Bailey describes five species growing in Queensland, all climbers. Of these *A.indica*, as its name implies, also grows in eastern India and the Malay Archipelago, and was amongst the plants collected by Banks and Solander while the "Endeavour" was undergoing repairs on the banks of the river subsequently named after her.

The writer has not found any of the native species growing in the Townsville district, but further north in the Cardwell district, Dallachy, collecting for the Melbourne (Kew) Botanic Gardens during the regime of Baron von Mueller, obtained *A. deltantha*, *A. pubera*, *A. thozeti* and *A. indica*. In southern Queensland the species *A. praevendsa* has been collected on the McPherson Range, and near Nerang Creek.

These native aristolochias furnish food for the larvae of various species of Birdwing butterflies, but since the importation of *A.elegans* it also has attracted them.

Concerning this, the editor of the "N.Q. Naturalist" has drawn my attention to an article by G. Sankowsky in "Wildlife in Australia", in which he names the host plants for the Richmond Birdwing, *Papilio priamus richmondius* Gray, as all species of native aristolochias, but not *A. elegans* which he asserts is poisonous to the larvae; while for the Cairns Birdwing, *P.priamus euphorion* Gray, he includes *A.elegans* as a host plant. Unfortunately he does not mention his suthority, or whether he made observations himself.

I have an *A. elegans* growing, on which a Birdwing sp. ? laid an egg; the larva from this reached the pupa stage, when it died, either by the delayed action of the poison or by some other cause.

G.A. Waterhouse in "What Butterfly is that?" writes of the host plants of the Cape York Birdwing *P.Priamus pronomus* Gray, as "various species of Aristolochias, poisonous vines that exude a milk-like juice when broken. The Dutchman's Pipe, so named on account of the shape of the flower, is one of these vines."

C. Barrett in "Butterflies of Australia and New Guinea" writes: "The Birdwing butterflies are classed in a section of the Papilionidae which is known as the Aristolochia Papilios. As the name implies they are practically all aristolochia feeders in the larval stage; a few species however feed on allied plants." He does not mention the toxic attributes of aristolochias.

The question now is whether *A. elegans* is definitely toxic to the Richmond Birdwing and not to the Cairns Birdwing. In the meantime it should be held suspect until more evidence is brought forward.

From a botanical point of view, the seed capsules of *A. elegans* are unique, for when the seeds are ready to be scattered, the capsule, consisting of six carpels, splits into six segments united at the base but spreading out like a miniature inverted parachute, each of the segments being suspended by a fibre string. The parachute swings in the breeze until a stronger puff causes it to swing further and sling out the small scale-like seeds which are easily carried away by the wind. The strings which suspend the inverted parachute are formed from the peduncle, the stalk which bears the flower and later the seed capsule. Within the peduncle are six vascular strands that conduct nutriment to each of the six carpels. When the capsule ripens and splits open, the peduncle also splits and the six strands remain attached to the carpels and also becomes the strings of the parachute.

The strange pipe-shaped flower of A. elegans is caused by the sepals and petals being fused into a single floral envelope, a single perianth, curved at the base to give the pipe appearance. The perianth is bi-lobed. A. grandiflora, the other exotic aristolochia grown in Queensland gardens, has a perianth that is not lipped, but has a kind of tail hanging from it, giving a fanciful resemblance to a bird with a long beak, hence the additional vernacular name of Pelican Flower. A. elegans also has an additional name of Calico Flower.

References:

Sankowsky, G. 1973.	A Garden full of Butterflies. Wildlife in Australia, vol. 10, No. 3, Brisbane.
Bailey, F. Manson. 1901.	The Queensland Flora, Part IV, Brisbane.
Waterhouse, G.H. 1932.	What Butterfly is That. Angus & Robertson, Brisbane.
Barrett & Burns, 1951.	Butterflies of Australia and New Guinea, Seward, Melbourne.

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A SPIDER ABERRATION - LINUS FIMBRIATUS

by CLYDE COLEMAN.

The fringed jumping spider, Linus fimbriatus, of the family Saltacidae, is well named in that it is fringed by prominent tufts of scales and dense hairs on the legs, palps, head-thorax and abdomen in a striking pattern of separate curved, fanlike fringes.

It differs from other spiders of this family in having all metatarsi (last joint of legs before the feet) long and slender. These are usually very heavy and spined in the front four legs and lighter in the rear four of other genera of Saltacidae. Another striking difference from other members of the family is that it spins a web to hold its eggsac. Its eye pattern and jumping ability, however, identify it with other Saltacidae.

The first specimen I studied was collected at Kuranda by a visiting American naturalist and science teacher, Mr. J.R. (Bob) Thomson. Later a colony was found on the rock walls of the path to Crystal Cascades and here a few females were photographed in their webs with eggsacs.

These webs were very irregular and had no central radiating point but were made by irregular crisscrossing silk strands, whose ends were anchored to the rock faces. All webs were built between large clefts in the rock and the spiders were resting in a hunched distorted position with two or more legs resting on the sac. One spider had hidden the sac behind a green leaf which had been securely fastened in the web. All sacs were roughly central in the web. Two females and sacs were taken for further study.

Placed in gauze containers with a large twiggy branch and their eggsacs, each spider had soon constructed a flimsy rough web and had hauled the eggsac up and secured it to the web strands on one end and to a twig on the other.

In constructing this web the spider dabbed the spinnerets to a twig, walked down to the nearest fork trailing a line with the spinnerets and one fourth leg; from there it climbed an opposite twig and fastened the line in an approximately horizontal position. This action was repeated a few times, after which the sac was hauled up one twig by one hind leg and spinnerets and fastened to web and twig.

No web spinning was observed under natural conditions and since these two specimens were taken the rock wall has been blasted wider for an enlargement of Cairns-Mulgrave water supply line.

WITH THE 'BIRDOES' TO GEORGETOWN.

by JOHN CROWHURST, Cairns.

At Easter the Cassels, Magarrys, Huddys (who left us Sunday morning), Bob Gricks and I went to Georgetown. We left Cairns at 7.30 a.m. on Friday, went up the Gillies Highway and skirted the Tablelands, stopping at Archer's Creek, where we saw a couple of Wedge-tailed Eagles and discovered square toilet seats for round bottoms, very uncomfortable. We charged through Innot Hot Springs, Mt. Garnet, the Forty-mile Scrub (studded with giant figs and bottle trees) and Mt. Surprise; stopped for lunch at Junction Creek, where we studied messages on the bridge and saw a Black-fronted Dotterel. Arrived at Georgetown's Council Caravan Park about 3 p.m.

Walking along Sandy Creek late in the afternoon, we saw the Yellow-fronted Honeyeater, one of twelve new birds for me, and not seen anywhere else, strange to say. Also observed Crested Pigeons, Double-banded and a lone Black-throated Finch, a party of female and juvenile Red-backed Wrens fossicking through the scrub, and we heard the Grey-crowned Babblers. That night we heard dingoes across the Etheridge River, the "more-porking" of a Boobook Owl (which we saw on Sunday night) and the distant bugling of Brolgas, and we caught an eclipse of the moon. Early in the morning, before sunrise, I was violently licked by Bob's small dog - a frightening experience.

Saturday morning found us at Durham. First birds for the day were the Singing Bushlarks; then Jack Cassels saw a Great Bowerbird and Jacky Winters or Brown Flycatchers. From then on it was one exciting sighting after another. Round a pool surrounded by thorny acacia-type bushes, I got my first Red-throated Honeyeater, attractive with yellow flashes on the wings. Later Yellow-tinted Honeyeaters appeared. Further on we found a sandy creek bed lined with pandanus, river red gums, lantana and the same thorny acacia. Black-throated Finches were feeding nestlings in a pandanus, crowds of Zebra and Double-banded Finches flitted along the banks. Blue-faced Honeyeaters, Apostle Birds, Grey-crowned Babblers, Mudlarks, Black-faced and Little Cuckoo-shrikes and Yellow-throated Miners were seen. Arnold Magarry, Bill Huddy and Craig saw a Budgerigar drinking. Red-browed Pardalotes called from a river red gum, Pale-headed Rosellas squabbled and Red-winged Parrots swooped along the creek. Bob Gricks disturbed a couple of bleary Tawny Frogmouths.

Drove over a slight hill to a great sheet of water covered with white flowering waterlilies. The second most thrilling sight of the trip was here - a flock of twelve Black-tailed Native Hens scattering on the far shore, darting off among the bushes. Royal and Yellow-billed Spoonbills, White Egrets, White and a couple of Glossy Ibis were doing their thing. Black and White-eyed Duck sailed amongst busy Coots and dowdy Little Grebes. A Peregrine Falcon surveyed us from a dead tree. Black Kites took a keen interest in us; every day a couple flew over the caravan park, hoping I suppose that one of us might have died. Black Cormorants hung out their washing and Galahs disrupted the scene.

Going back, we found Squatter Pigeons coming in and saw mixed groups of Peaceful and Diamond Doves browsing seeds.

Late Saturday, 4 p.m., some of us returned to the sandy creek at Durham, while others went nutty and knocked little white balls about on a nearby golf course. We sat under our thorny shade beside a water soakage, a series of pools scalloped in sand, with more of our eternal friend, the thorny acacia, on the far bank. One part had died and to this all the small birds seemed to come. Hundreds of Red-throated Honeyeaters flitted in, joined by Zebra Finches (going under the new name, Hotlips), busy Double-banded and later smartly attired Black-throated and Chestnut-breasted Finches.

Suddenly Marion Cassels gurgled hoarsely, "Gouldian Finch!" Never have I been so excited. I dropped my binoculars and looked through my comb, got out my sunglasses, blew my nose and took off my boots before I was somewhat calmer. Opposite was one of the most thrilling and beautiful birds I ever wish to see. It wasn't the common black-faced variety but the red-faced, and the colours were unbelievable. I suppose he was there for a minute, I don't know. He hopped from the top perch, then lower and lower again, then onto the sand and bingo, no more! The high-light of the trip.

Before we left a Singing Honeyeater appeared, and going home we were observed by a Bustard beside the road, which strode imperiously away. Saw quite a few bustards over the four days. A Brown Goshawk was also seen.

Sunday I woke early, not licked this time, just a cold nose pushed in my earhole. We went up the Forsayth road. Right on the edge of town we saw sandy wallabies, then two big red kangaroos and later a wallaroo bounding away. Where we stopped beside two small-leaved bauhinias, the forest included messmate and a species of geebung. Brown Weebills ferretted amongst the leaves, Red-backed Kingfishers meditated, White-winged Trillers (not in eclipse plumage this time) patrolled the grasslands, Black Treecreepers played hide-and-seek, Brown Flycatchers flirted, White-throated Warblers tantalised (heard but never seen), and Red-browed Pardalotes dotted their song in the warm air. A Grey Falcon darted swiftly over.

Back at Durham at a melaleuca we saw Banded Honeyeaters, a distinctive tailored black and white bird, thousands of the now very common Red-throated Honeyeaters, a fes Yellow-tinted and Blue-faced Honeyeaters and some Yellow-throated Miners.

Down to the waterhole again, where Arnold sat on a thorn and Dawn said "Shush". We watched the finches and multitudes of Red-throated Honeyeaters bathing once more. Four Red-tailed Black Cockatoos creaked overhead. Grey-crowned Babblers, Apostle Birds, Miners and the odd Red-winged Parrot and Pale Headed Rosella came to drink at water further up from where we were. The only new bird for the waterhole was a Yellow Honeyeater. The smell of cattle was overpowering; we finally got used to faces appearing round corners and mooing at us and to being nearly trampled on by mobs of cattle.

Later Cumberland Dam loomed up, covered with densely flowering white waterlilies. Jacanas minced over the leaves, White-necked Herons stood motionless, Bee-eaters hawked overhead, a single Darter wished he was somewhere else and a hawk or kite was doing something unmentionable in tall green rushes. Later again we revisited the dam at Durham, which this time held gangs of Grey Teal and plaintive Grass Whistle Ducks, a coy Black Swan and some loud mouthed Magpie Geese. A pair of Red-kneed Dotterels busily ducked around the water's edge.

Going back we stalked a Singing Honeyeater, saw and heard a Bar-shouldered Dove, and cursed the Crows. We sat at the waterhold, where again Arnold sat on a thorn and Dawn remonstrated. Willie Wagtails put on a comedy session and Red-backed Wrens tinkled through the bush. Going back to the car we got Restless Flycatchers being restless.

Monday morning I woke me, not Bob's dog. Did a short trip to the Durham waterhole again, where Arnold didn't sit on anything and Dawn said nothing. A Black Tree-creeper came down on the sand, and anothe Singing Honeyeater. After breakfast we headed home. On the Newcastle Ranges, the Magarrys saw White-browed Woodswallows and Ground Cuckoo Strikes. We scorched back to the Crater, weeing a Cassowary and chicks on the way, came down the Gillies Highway, staggered into Cairns about 6 p.m. and went to bed.

I forgot to mention the Purple-backed Wrens seen on the bed of the Etheridge River on Saturday, a scruffy male with blue head and red patch and the slightly blue-tinged females. The Black-faced Woodswallows don't really need mentioning.

THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES Part VII

by JAMES A. BAINES

Note: STCN = Standard Trade Common Name

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Citronella. This genus was set up in 1843 by D. Don, who, according to Francis, took the name from a Chilean vernacular name for a American species. If so, the word would come from Spanish, and hence from Latin. Citronella is a diminutive of Citron, which is a form of Citrus, the generic name for lemons, oranges, etc. Oil of citronella familiar as a mosquito repellant, comes from tropical grasses, Cymbopogon nardus, Citronella Grass, and C. citratus, Lemon Grass (fam. Gramineae or Poaceae). Citronella moorei is Churnwood or STCN Silky Beech, and C. smythii is White Oak or Soap Box, STCN Northern Silky Beech (once classified in Chariessa and Villaresia). Fam. Icacinaceae. Lat citrus is cognate with cedrus (through Gk kedros), because the fruit of the citron, Citrus medica, was substituted in ancient Jewish ritual for the cone of the cedar of Lebanon, Cedrus libani.

Clacxylon. Gk klac, to break; xylon, wood; alluding to the brittleness of the wood. Bailey and later Burbidge list 4 Q. species, but only one, C. australe, is included by Francis.

Cleistocalyx. Gk kleistos, that can be closed, enclosed; kalyx, bud cup, calyx; the buds being top-shaped and pointed, fully enclosing the petals. The sole species is endemic in N.Q., C. gustavioides, described by Bailey as a species of Eugenia; specific epithet means 'like Gustavia', a genus of S. America in fam. Lecythidaceae. These myrtaceous trees are called Grey Satinash.

Clerodendrum. Gk kleros, chance; dendron, tree; supposedly alluding to the variable medicinal qualities. The form with -um ending, used in the original description which must prevail, is a latinized version o the purer Gk Clerodendron, the form used by Bailey. Many showy tropical species are cultivated in gardens. Francis lists 2 species. Fam. Verbenaceae.

Codonocarpus. Gk kodon, a bell; karpos, fruit; because the fruits are shaped like little bells. C. attenuatus, found in Q. subtropical rain forests, and C. cotinifolius, found in the dry inland, are both known as Bellfruit Trees. Fam. Gyrostemonaceae.

Commersonia. Named by the Forsters after French naturalist, Philibert Commerson (1728-73), who as a member of the Bougainville expedition discovered many new species, but whose premature death in Mauritius meant that his herbarium had to be worked on and results published by others. Bailey lists 3 species for Q., including C. fraseri, Black-fellows' Hemp (which reaches V. in East Gippsland) and the species included by Francis, C. bartramia, Brown Kurrajong. Fam. Sterculiaceae

Croton. Gk kroton, a tick; from the resemblance of the seeds to ticks. Francis lists 5 species, including C. insularis, Q. Cascarilla Bark (specific name from its discovery first in the South Sea islands; common name from its relationship to C. cascarilla, Cascarilla Bark of the Bahamas.) Cascarilla is diminutive of Spanish cascara, bark, from which comes the drug. The crotons with showy, variegated leaves grown in tropical gardens are mostly varieties of Codiaeum pictum, like Croton, in fam. Euphorbiaceae. (The writer remembers talking to the parish priest in his garden at Proserpine, 1956; he had nearly 100 varieties!)

Cryptocarya. Gk kryptos, hidden; karyon, nut; because the nut is hidden in the perianth-tube. Francis lists 24 species, most named, because o the appearance of timber and nuts, as different kinds of walnut. Fam. Lauraceae. (The true walnuts, Juglans, literally Jupiter's acorns, ar in fam. Juglandaceae.) C. cinnamomifolia, Cinnamon Laurel, has an apt common name.

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CONTENTS

The Cassowary by F. Jörissen . . . 2
Aquarium Antics by Barbara Collins . . 3
Two Queensland Palms Suitable for Indoors by Keith Kennedy . . . 5
A Daytime Sighting of a Lumholtz Tree Kangaroo by Rozanne Glazebrook . 6
Information Services in the Life Sciences 6
Origin of Generic Names of Queensland Rainforest Trees Part VIII by James A. Baines . . 7

Each author is responsible for the opinions and facts expressed in his or her article.

Seasons Greetings to all.

-oOo-

THE CASSOWARY

by F. JORISSEN, El Arish.

We are migrants, have a small poultry farm and grow bananas. A big cassowary used to walk through the orchard and we left a few bunches of bananas to ripen for the bird. After a few months it came nearer to the house with two chicks which, as they were still striped, could have been about four months old. We were just feeding the ducks with a bowl of mixed fowl feed, and were surprised to see that, though the big bird did not come nearer himself, he apparently told his chicks to go and feed with the ducks. The little ones took his advice.

From then on the chicks came daily for their meal. So we were able to see them growing up and to study their habits.

The cassowary is mature at the age of about three years. There is no difference in colouring between male and female, but the female is bigger and more solidly built, and her helmet (casque as it is called by the scientists) is higher. The casque provides protection for their heads when they push their way through the rain forest with its many thorny shrubs and vines. Their "weapon" is a long, sharp-pointed nail at the inner toe of their large and powerful feet.

The female is "boss". Every cassowary, apparently, has a territory of its own. Barbara, as we named our female, had an area of approximately 60 acres or perhaps more, as the rain forest around our place is not very dense and might not provide enough food. In this area she tolerated two males that came to the house to be fed, one approaching always from the North, the other from the South-West. So apparently they also had their own special areas. But they never came at the same time. If they happened to arrive simultaneously, they each tried to frighten the other away by stretching their necks and raising their feathers, which makes them look even bigger than they are. One of the birds would then flee.

Only during their mating time, that is once a year, we have seen a male and a female bird coming together. At first the female pretends to chase the male away, but after a few days we have been feeding one of them with the left and the other with the right hand.

Barbara mated with both males but never simultaneously. After she had mated with one male and laid her eggs, the other male started courting her. When courting, the male follows his love wherever she goes, sometimes dancing a few steps around her, making a throaty noise. One of the males was Barbara's brother, the second chick of the old bird. The other male came a few years later as an adult bird with a chick.

After a courtship of about four weeks the male does not come to the house for about 2½ months. Then he comes again as usual, bringing one or two chicks about 2 weeks old with him. They are lovely little birds, dark brown and creamy white striped, which provides an excellent camouflage in the shade of the undergrowth, with big blue eyes. Even tiny wattles are present already. At about 5 months, the stripes gradually fade and the young bird becomes a plain brown; then the back changes to black, they get their beautiful colours around neck and head, and their wattles and casque start to grow. When the chicks are about 9 months old, their father (it is the male that incubates and rears the chicks) chases them away and they have to find a territory of their own.

While the chicks are still depending on his protection, the male cassowary is a devoted father. During the torrential rains of the wet season early last year, one of the males apparently considered it was not safe enough for his chicks to return to the scrub some days, so camped at a more sheltered spot in our paddock. He lay down flat on his belly, spreading his tail feathers like a blanket, and the two chicks crawled underneath, only their little heads popping up.

Once we saw a fight between two males, both with a chick. After the usual stretching of necks and raising of feathers, they bent their heads right under their bellies and roared loudly. They did this several times, then hissed and charged, colliding heavily, kicking with both feet forward at once. After having been kicked, one of the birds - it was the one that came later - fled and was chased by the other one who kept kicking him. The poor bird made some mewing noises as if it were crying. After the fight both returned to their chicks.

Females also fight. Barbara remained queen of her territory for 12 years. Then during mating time another big female cassowary appeared. The ladies started their fight in the usual way by stretching necks and raising feathers and making loud rumbling noises. My husband drove the car between the birds in order to separate them and to frighten them away. With success; but what happened in the scrub we don't know.

A few days after this encounter Barbara did not come to the house any more. We keep wondering whether she has wandered off and found another territory or whether she got killed. Now Nova, as we called the new female, has replaced her.

Friends of ours who own a banana farm give us their reject bananas for the cassowaries. They feed on ripe fruit only. Pineapples have to be cut into pieces and so have pawpaws and big mangoes, but guavas and small mangoes are swallowed whole. We have also seen them eating mice and rats which we had caught in traps. Barbara even swallowed a big whitetail rat in the whole, without hesitating and with great appetite, so she must have known what it was and have eaten rats before. So cassowaries do not feed on fruit only.

At present one of the males, now 14 years old, is sitting on eggs again. The other one sadly was killed by dogs and, although we tried to feed his little chick and to rear it without its father's help, it died. Large areas of rain forest in our district have been cleared, so many cassowaries must have starved.

We do hope we can enjoy the company of these beautiful birds for many years to come.

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AQUARIUM ANTICS

by BARBARA COLLINS

The following are a few exerpts from my observations of our Marine Aquarium - a circus in miniature!

Shells of the family Muricidae are drillers, so it was no surprise one morning to find a specimen of Murex brunneus atop a Spondylus ducalis. It was strange, however, that it should move away after several days and apparently partially burrow in the sand. On investigation I discovered a large bivalve Periglypta puerpera there, and it was on this that the Murex had designs.

In the meantime another Murex took the opportunity to move onto the vacated Spondylus. This brought a violent reaction from the Spondylus, which "hiccupped" vigorously in an attempt to dislodge its attacker. This panic message was relayed to its attached mate and the pair caused quite a disturbance. It was a good show for bivalves that are normally

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firmly attached to the substrate.

One evening our Shawl Crab, Atergatis floridus, seemed to be doing some extraordinary things. He was an attractive crustacean, shiny olive green carapace with white markings and black nippers. There he was, perched precariously on a branch of coral with a boulder as large as himself clasped firmly with his nippers. Beneath him was a very agitated pair of Pistol Shrimps, who believed their home was in danger and were snapping furiously at the crab. Oblivious, the crab ascended and descended the same coral branch several times, eventually becoming careless and dropping the rock, bringing reprisals from the shrimps. The crab set about retrieving his treasure and the shrimps attacked.

War was declared and the battle raged. The crab simply turned his carapace to a barrage of sand from the shrimps and dug in. Shrimps retreated and crab advanced. Shrimps attacked with pincers outstretched, snapping furiously; crab retreated, diverted his attention to the rear of the shrimps' sanctuary, but could not squeeze through the crevice. Shrimps still snapping; crab defensive and striking out. Shrimp charged, and crab on the run, grabbed unguarded rock and scurried off in the opposite direction. Shrimps, fiercely guarding both entrances to their hide, commenced building sand barriers against further attack.

Crab returned with a new strategy. Dragging boulder, he attempted to climb onto the coral outcrop above the shrimps' hideout. Shrimps again went berserk. Crab persisted in his labours, dropped the rock and hung upside down to retrieve it from the sand barrier. Amid constant harassment from the shrimps, he secured his rock on the coral rampart and then dragged himself, clutching the rock, backwards up the coral branch. Once there, down he came again, onto the sand and away, dragging the rock behind, now rolling it. Shrimps moved about cautiously checking the area and, satisfied the enemy had gone, set up vigil outside their burrow.

The crab now was away across the tank to an empty clam. Reprisals from shrimps beneath (what more!). Crab beat a hasty retreat from this error of judgement and discovered his clam - almost full of pieces of coral. He had been very busy. The tank thermometer had already been installed and partially buried. He dragged the rock over the side of the clam and deposited it carefully on top of the rest, and then slid in on top, King of his Castle. Later we saw him struggling with the damaged tank hydrometer and by morning it was secured neatly amongst the other treasures. Then later we saw empty nippers and carapace: our crab had moulted.

Then there was the tug-o'-war between the Mantis Squilla and the Shawl Crab over a prawn; the disagreement over a female between the Pagurus deformis (fascinating white hairy hermit crabs with the anemone Calliactis miriam smothered all over their shells); and a fascinating fight between an Olive and a Coastal Hermit Crab over a piece of fish.

The most humorous though tragic incident was that of the Camouflage Crab (species unknown) which attached bracelets of chopped squid to its legs. We found him next morning dismembered by the fish. As there was an abundance of material in the aquarium suitable for decoration of his person, we feel he was storing a supply of food to be available when required.

-oOo-

N.B. Annual subscriptions are due once again. What, already?
Incredible, but true!

TWO QUEENSLAND PALMS SUITABLE FOR INDOORS

by KEITH KENNEDY, Townsville.

Most bush-house and indoor plants cultivated in Queensland are exotics, very few are Australian. However there are two Queensland palms which are very suitable for the bush-house, also as table palms. They are the Alexandra Palm, Archontophoenix alexandrae, and A. cunninghamii, called Cunningham's Seaforthia. The specific name of the former was given last century by Baron von Mueller, director of Botanic Gardens, Melbourne, in honour of the then Princess Alexandra. That of the latter honours Alan Cunningham, the botanist and explorer, who discovered the Darling Downs and whose remains are buried under an obelisk in the Sydney Botanic Gardens.

In von Mueller's time the two species were considered as belonging to the genus Ptychosperma, found in southern Asia as well as in Queensland. Later the botanists Wendland and Drude gave them a genus of their own called Archontophoenix, made up of two Greek words, archon meaning a chief or king, because of their stately appearance, and phoenix, the date palm, and not the phoenix bird of mythology which was said to have the power to rise from its ashes. A now discarded name for A. cunningham, given by Sir Joseph Hooker, was Seaforthia elegans. Some nurserymen still call it the Seaforthia Palm.

Both these palms are feather palms. They can be easily identified by the pinnae of their fronds, which in A. alexandrae are glaucus on the underside, while in A. cunninghamii the underside is green.

A. alexandrae is mainly a tropical palm and becomes rare south of Mackay, while A. cunninghamii, although occasionally met with in the northern tropics, is common in southern Queensland and extends into New South Wales.

Propagation is by seeds. When juvenile the palms are slow growers and can be used as pot plants for several years. They can then be transplanted into containers and become porch plants for several more years. Eventually they have to be planted out in the garden or, if the authorities permit, in the street, to which they give a tropical effect. In the Musicological Museum gardens, Townsville, are some of these palms which have outgrown the indoor and porch stages but have not yet reached fructification stage, and are very ornamental.

Although they are endemic to Australia, E. Blatter, Professor of Botany, St. Xaviers College, Bombay, thought so much of these palms that he included them with illustrations in his book on "Palms of British India and Ceylon". For their cultivation in Europe he wrote: "A genus of elegant stove palms. The species thrive best in fibrous loam, leaf mould and sand. Thorough drainage and an abundant supply of water are important points in their culture." By stove palms he means hot-house palms.

In Townsville the potting mixture I have found successful is: equal parts garden soil, leaf mould, coarse sand, plus a handful of crushed shell grit and a few pieces of rusty iron. I find that watering twice a week is satisfactory.

References: Bailey, 1902, Queensland Flora V. Brisbane.

Blatter, 1926, The Palms of British India and Ceylon. Oxford Press.

Wendland and Drude, 1875, Palmae Australasicae in Linnaea XXXIX.

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A DAYTIME SIGHTING OF A LUMHOLTZ TREE KANGAROO.

by ROZANNE GLAZEBROOK

I never knew tree kangaroos existed until my husband and I accidentally hit one while driving between Millaa Millaa and Ravenshoe one cold drizzly night in 1975. Luckily the animal was not hurt and, after resting for a few minutes, disappeared into the rainforest beside the road.

In April this year we were again on the Atherton Tablelands, close to this same area. We went for a walk along an old disused logging track in the rainforest, looking for birds and photographing trees and plants. The track was fairly steep and overgrown with numerous gympie stinger trees. John stopped to photograph a staghorn fern high up a beech tree. As he looked up, he suddenly saw a beautiful tree kangaroo looking down at him.

We were thrilled to see a Lumholtz tree kangaroo, Dendrolagus lumholtzi, in broad daylight in its natural habitat, the mountainous tropical rainforest of north east Queensland. I had read that tree kangaroos are mainly nocturnal in their habits. I didn't expect to see one wide awake at five o'clock in the afternoon. The animal was 30 to 40 feet up a branch of a slender tree, perched on his back legs, with his tail, which was about three feet long, moving slowly from vertical to horizontal positions in an effort to maintain his balance. The tail was black on the underside and reddish brown on top, the last few inches of it having longer hairs than the rest.

The Boongary (Aboriginal name for tree kangaroo) had a grey back but beautiful warm reddish brown fur flanks. The undersurface of the belly was off-white. His face and nose were black, with a white band across the forehead. He had small ears which flicked backwards and forwards in different directions.

My neck began to ache as I sat on the ground looking up through the binoculars. The kangaroo continued to sit on his thin branch and stare down at me with his small bright eyes. John went back to the car for more film. The animal watched him go up the track.

When John was returning, the tree kangaroo strained his head forward, put his front paws on the branch, flicked his ears and bent forward several times as if about to leap to another tree. But he remained on his branch, appearing more stable now that he had all four feet on the limb, and the tail stopped moving. He kept his eyes on John coming down the track, but every now and again quickly looked back to check on me.

By 6.15p.m. it was beginning to get dark in the rainforest and we wanted to avoid any nasty accidents with the gympie trees. We left our friend wondering what strange creatures he had seen.

(See "Wildlife in Australia", Vol. 15, No. 2 - Winter 1978 - for more information on the "Boongary" from Rozanne Glazebrook. Ed.)

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THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES Part VIII

by JAMES A. BAINES

Note: STCN = Standard Trade Common Name
PCN = Preferred Common Name

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Erratum: In Part VII, Claoxylon, Gk klao, appeared as Clacxylon, Gk klac.

Cupaniopsis. Gk opsis, appearance; Cupania, the genus honouring Italian botanist F.F. Cupani, in which these trees were first placed (as in Bailey's "Flora of Qld"). The new genus was set up by Radlkofer. Timber of C. foveolata is STCN White Tamarind or White Foambark, and C. anacardioides var. parvifolia is STCN Green-leaved Tamarind, Beach Tamarind or Tuckeroo. Fam. Sapindaceae (whereas the true tamarinds are leguminous trees).

Cuttsia. Named by von Mueller after J. Cutts, one of his many helpers whom he honoured in specific and, as in this case, in generic names. C. viburnea is a monotypic species native in Q. in the Macpherson Range and along the Logan River. Fam. Escalloniaceae.

Cyathea. Gk kyatheion, a little cup (from kyathos, cup); alluding to the cup-like spore-cases. C. leichhardtiana is Prickly Tree-fern. The specific epithet honours Ludwig Leichhardt, German-born explorer of N.Q.

Daphnandra. Gk andros (genitive of aner), a man, male; Daphne, the nymph Diana, said to have been turned into a laurel tree; because the anthers resemble those of Daphne, the fragrant garden shrub. D. micrantha, STCN Socket Sassafras, Socketwood or Canary Sassafras, and D. repandula, STCN Northern Sassafras, or Yellow Sassafras, are two of the species. Fam. Monimiaceae.

Darlingia. Bailey records that this genus was named after Sir Ralph Darling, Governor of N.S.W. from 1825 to 1831. Cunningham certainly named the Darling Downs, Sturt named the Darling River, and Stirling named the "General Darling's", later shortened to Darling Range, east of Perth, after him. It seems that Mueller named the genus Darlingia after Sir Charles Darling, nephew of Ralph, who became Governor of V. in 1863 at the time Mueller was trying to classify the new plant. He first called it Helicia darlingiana, later Knightia darlingii, and finally set up a new genus for D. spectatissima; the valid name is now D. darlingiana because of the priority rules. It and the other species are known as Brown Silky Oaks. Fam. Proteaceae.

Davidsonia. Named by Mueller after J.E. Davidson. D. pruriens is known as Davidsonian Plum; it is a monotypic species, fam. Davidsoniaceae.

Decaspermum. Gk deka, ten; sperma, seed; because the fruit is ten-seede D.fruticosum is PCN Brown Myrtle or Grey Persimmon; the former name being preferable as it is in fam. Myrtaceae, whereas Diospyros (the persimmons sold as edible fruits) is in Ebenaceae.

Dendrocnide. Gk dendron, tree; knide, nettle; i.e. tree nettle, an apt name; the common stinging nettles of the genus Urtica belong to the same family. Formerly known as Laportea, these virulent stingers were known to Aborigines as "gympie-gympie", hence the name of the city of Gympie. The generic name should be pronounced Den-droc-nid-e, in 4 syllables, with accent on the second. The best known species is D. excelsa (syn. L. gigas), Giant Stinging Tree. Fam. Urticaceae.

Delarbrea. Named by Vieillard after French botanist M. Delarbre, who explored the Massif Central botanically, and in 1796 published a Flora of Auvergne. His surname means, appropriately, "of the tree" (de l'arbre). D. michieana appears to have no common name. Fam. Araliaceae.

Denhamia. Named by Meissner after Capt. Dixon Denham (1786-1828), an English traveller in Africa, who had fought at Waterloo. With Oudney and Clapperton, he explored central Sudan, then the w. and s. shores of Lake Chad, which they were the first Europeans to see. He published a map of Kano, Nigeria. Oudney, botanist of the expedition, died from the privations of the journey. The genus has 4 species, all tropical Australian, including D. pittosporoides. Fam. Celastraceae.

Deplanchea. Named by Vieillard after Dr. Deplanche, who, like himself, was a French naval surgeon; they both made a study of the flora of New Caledonia, which has many affinities with that of tropical Australia. D. tetraphylla is known in the timber trade as Bignonia; the genus is in fam. Bignoniaceae. (The type genus, Bignonia, is now restricted to one N. American species; it honours the French abbé Bignon, who was elected to Académie des Sciences (1691) and wrote a book on botany.)

Dicksonia. Named by L'Héritier after James Dickson (1738-1822), F.L.S., an English nurseryman and botanist who wrote on British cryptogams, his mosses being in the herbarium of the British Museum. His phanerogams went to the Linnean Society. D. antarctica is Soft Tree Fern.

Dillenia. Named by Linnaeus after Johann Jacob Dillenius (1684-1747), who was born at Darmstadt, Germany, gradusted M.D. at Giessen, came to England in 1721, and went to Oxford in 1728 as first Sherardian professor of botany. D. alata, known as Red Beech, is sole Aust. species, although the many species of Hibbertia (in fam. Dilleniaceae) were formerly classified in Dillenia.

Diospryos. Gk dios, divine; pyros, wheat; because it was imagined that the fruit of a European species (according to Francis) produced oblivion when eaten. Jaeger, also Smith and Stearn, agree with this derivation, but, as pyr, pyros, is also Gk for fire (of. pyrotechnics), one wonders whether Linnaeus did not have "divine fire" in mind rather than "divine wheat", as the fruits are nothing like a cereal grain. D. virginiana is American Date-plum, or Persimmon (accent on second syllable), which is a corruption of the name of the fruit in American Indian dialect of Powhatan. Q. has at least 8 species, known as kinds of ebony or persimmon. Fam. Ebenaceae. (Diospyros also has the second syllable stress.)

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CONTENTS

Burrowing Spider Behaviour in Waterlogged Soil
by Clyde Coleman . . . 2

A Native Predator of the Cane Toad (Bufo Marinus)
by R.W. Hutchinga . . . 4

The Trusting Sunbird by T. Ford 5

Herbert River Ringtail Possum in Open Forest on Atherton Tablelands
by Rupert Russell . . . 6

Successful Nature Display by Marion Cassels . . . 7

Origin of Generic Names of Queensland Rainforest Trees Part IX
by James A. Baines . . . 8

Each author is responsible for the opinions and facts expressed in his or her article.

BURROWING SPIDER BEHAVIOUR IN WATERLOGGED SOIL

by CLYDE COLEMAN, Edmonton.

On December 17th, 1978, fourteen burrows of Lampropodus iredescens (shining footed spider) were marked with metal pegs at different heights on low and high banks of a creek flowing through my property at Edmonton. This was to help determine whether these spiders vacate their burrows when the ground is sodden, or whether they remain in the underground silk chambers which this species construct and which by test have proved to be watertight.

All spiders under observation proved to be females; the male is unknown.

These burrows and others in the area were under observation for seven months in 1978 (May-Dec.). Most were closed during the dry period from July to the light rains later in the year. In previous wet seasons many of these burrows had been partly or completely closed during and after periods of heavy rain, or prolonged medium rains.

On first warnings of the depression prior to cyclone Peter, all marked burrows were checked by torch-light in the early night hours. All were open and occupants noted at burrows.

Burrows were checked at midday, 1.1.79, after the first rains of the year. A few were partly closed with litter and soil, but whether by wind and rain or by the spider could not be determined. Debris was removed from the openings of two burrows and there was no sign of silk on the undersurface (which would have been a sign of spider activity), so at this stage closure of the burrows seems to have been due to wind and rain.

From this time onward through cyclone Peter and the following heavy rains, these burrows were checked (with few exceptions) three times a day: 7-8 a.m., midday and 5-6 p.m. Some remained closed for more than three weeks; others would be opened after a few days finer weather, only to be closed after the onset of further heavy rain. Some burrow entrances in open situations were completely smoothed over by wind and water and the tops silted level with the surrounding soil. When these exposed burrows were reopened, the first work had evidently been done from below as the first indication was a rupturing of the soil surface, which was pushed up to form a slight dome. Opening of a burrow was usually the work of two nights but on a few occasions, three. When completed, all were wide open and at a slight angle to the vertical (which is usual in this species). A few had been partly hooded by a dry leaf bound to the soil with fine silk.

This pattern continued all through the study period to early February. During this time only three of the burrows remained open although partly sheltered by an occasional fallen leaf. Checking at night revealed a hopeful, hungry spider at one or more of these three burrows. (The female does not leave the burrow entrance to hunt, but always has the rear legs anchored to the entrance and grabs prey that passes within reach.)

Some of these burrows were in situations that held surface water for varying periods after heavy local rains. Others on the lower creek banks were covered with water during flooding, at depths varying from about $\frac{1}{2}$m. to over a metre. One of these was dug out after its third immersion and the chamber examined for damage from water. The spider was very active and very annoyed, and it took a strong pull with a sharp wire hook to pull the door open as she maintained a grip with fangs, palps and the hooks on the four front feet. The chamber was slightly frayed and soaked on the outside, but the inside was quite dry. It did not have the firm texture of sacs dug out during the dry weather and I think its water repelling ability would be less when removed than when cemented to the firm soil of the chamber walls.

Some of the loose soil domes formed prior to the re-opening of the burrows were turned over with a sharp knife, and a few had a flimsy film of loose silk on the undersurface of the covering soil. The evidence gained from this study does not prove that the spiders close their burrows during periods of heavy rain, but the use of silk under the soil and debris covering the opening indicates that some of them take steps to prevent the filling of the lower part of their burrows with water borne debris.

One burrow in the drier part of the study area was opened in late January and the silk chamber lining removed with its occupant, in order to test the spider's strength in keeping its door shut. The rear end of this silk chamber was clamped to a vertical support. A sharp wire hook and cord were attached to a honey jar and the hook was inserted in the door close to the side opposite the hinge; then water was added to the jar until the spider relaxed and the door was pulled open. The weight of the hook, jar and water was 203 grams - the spider's weight less than 3 grams; thus the pull exerted by this spider in keeping its door shut was nearly 60 times its own weight. The tenacity or blind instinct of this spider in retaining its grip can be tested by anyone with patience and a steady hand.

Lampropodus iredescens burrows start at a slight angle to the vertical and then continue as a shaft to an average depth of about 40 cms. The resting chamber is excavated at right angles to the shaft, is oval in shape, about twice the length of the spider, and about five times the volume of its body. The bottom of the shaft below the chamber is used as a rubbish dump for the remains of her meals. The egg sac is made in the chamber and remains with the mother for some months before dispersing.

I have photographed the chamber in position at the side of the burrow and with a fine scalpel and fine curved scissors have cut a large square of the thin silk cover out of the sac adjacent to the door and its collar. Provided a bright light was not shone on her eyes during this operation she maintained a solid grip on the inside of the door. If the scissors or lancet touched one of her feet she would lift it and resume her grip when the instrument had done its work. In this way, on one occasion, more than half of the back of one specimen was exposed and then the door pulled slowly open. She endured several repeats of this action and then relaxed her grip and moved to the rear of the sac.

This species makes silken chambers early in life and the rule seems to be (personal observation) the older the spider the deeper the chamber below the ground (bandicoots dig up quite a few). Those who survive are somewhat like the wise virgins - take precautions and the Lord will reward you with a long life and a succession of husbands to love, cherish, and if you are quick enough, to eat!

The chamber of a mature female of this species has a volume about five times her own and the finished product is well worthy of some comment. Her tools are what nature provides; fangs, palps, and her legs, plus the flexible spinnerets. These latter she has no hope of seeing due to the position of her eyes and the stiffness of her body. Down in the darkness of her burrow, 9 inches (22 cm), she must rely on touch. Where possible the chamber is egg shaped with the exception of the door and its collar, and it is to these latter that she gives her greatest care.

The soft clinging silk of spider webs that are familiar to most people in country areas is far removed from that making up the outside

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of the door and its recess or collar. The silk of these areas is tougher than the wing cases of a large beetle and requires a sharp lancet to cut it. Where the door fits into its collar we see work that would do credit to a skilled human tradesman. Here the hard silk has a firm glossy lining which makes possible a fit that can exclude water (as I have proved by immersing a sac and its occupant in a jar of water for several hours). She was none the worse and the sac was a little flaccid on its outer surface only.

It is a strange life - the life of a spider - so strange that some naturalist friends of mine have called them "aliens among us". In spite of a few black sheep, they are a very useful group of animals destroying countless millions of insects annually, while their life histories and courtship dances are some of the most interesting facets of natural history. The dependence on silk is no less important with the burrowers than with the orb weavers, and their skill in its use rivals that of their aerial sisters with their large orb webs.

Imagine if you can, the spider halfway down her burrow, first excavating and then smoothing the chamber walls prior to giving them their tightly woven silk lining with its liquid binder before she forms the all important door and its collar. On this she lavishes her greatest care. Here the flexibility of her spinnerets and the touch of her palps form the curve of the collar and its beautifully formed door; a culmination of an inherited consumate skill or blind instinct?

-oOo-

A NATIVE PREDATOR OF THE CANE TOAD (BUFO MARINUS)

by R.W. HUTCHINGS

The cane toad is a serious threat to many animal species including our native fauna, both through its voracious appetite as it devours everything that moves and by the toxin it secretes. This problem is steadily increasing as the cane toad spreads throughout Australia. Its successful colonization is undoubtedly due to its high reproductive capacity combined with very few Australian predators. However, observations of mine have shown that we may already have the genetic potential to control this pest, and indeed, this scourge may already have been contained to some extent by an extremely common yet unacclaimed predator.

While keeping an aquarium stocked with native aquatic fauna, I first became aware of the regularity with which several of my specimens of freshwater crayfish, belonging to the genus Cherax, devoured both live and dead cane toad tadpoles. Though these tadpoles were at various stages of development, they were torn apart by the crayfishes' mandibles and third maxillipeds, then devoured.

Because crayfish are aquatic and nocturnal they do not lend themselves to easy observation by the casual naturalist, and hence their feeding habits outside captivity are relatively unknown.

However, devastation of tadpole populations by these night-time marauders will never be total as cane toads breed in any water, such as roadside ditches, where crayfish are not found. Also Cherax crayfish seldom exceed 8 inches in overall length, and are thus only capable of destroying very small cane toads. Control of the adult toads is of far greater significance.

Recently, I had the good fortune to observe closely the feeding habits of Australian freshwater crayfish belonging to the genus Euastacus. Unlike Cherax, Euastacus reach weights of in excess of 2 kg, and have claw spans greater than 60 cm.

The first indications that these crayfish were potential cane toad predators came when I was keeping specimens of Euastacus in an outside pond which was frequented by cane toads. At the time I endeavoured to keep cane toads out of the pond as I feared they would contaminate the water and kill my specimens. However, I did not check the water often enough, and to my surprise, after a time I began finding dead, partly consumed cane toads in the pond.

This prompted me to leave the cane toads in the pond, to see the result. To my surprise the cane toad bodies continued to accumulate though there were no fatalities to the crayfish. By this time there was no doubt in my mind that these crayfish were eating the cane toads and showing no obvious side effects. The evidence was strong, but I had not actually seen a crayfish eat a cane toad, so I sought to observe this event.

The test was simple. I merely presented a large live, adult toad to a crayfish in an aquarium, then patiently observed the result.

On contact with the toad, the crayfish lashed forward with his large chelipeds, and seized the toad. The crayfish tenaciously held the toad at the nearest point of contact, and manoeuvered it until it had a secure grip. This grip was maintained until the initial struggling subsided at which point a portion of the toad was manoeuvered and grasped by the third maxillipeds. It was then eaten while still alive. I have since confirmed this observation on several occasions.

The mandibles are used to grasp a piece of toad, often a limb, then the third maxillipeds and the large chelipeds simultaneously stretch the toad away from the crayfish, thus tearing a piece off. Tough though the toad may be, the crayfish has no difficulty in tearing entire limbs off, piece by piece. Often the abdomen of the toad is torn open and the internal organs exteriorised and devoured. Death to the toad appears to come from drowning or bleeding.

So far I have observed Euastacus hystricosus, Euastacus valentulus, and Euastacus suttoni indulge in toad eating. The limited distribution of Euastacus hystricosus and Euastacus suttoni prevents them from contributing any real control. However, the widely distributed Euastacus valentulus from northern New South Wales has the potential to contribute greatly to cane toad control, especially if its numbers are permitted to build up to former populations, which were depleted by overfishing. The major limitation of this control is, of course, that it relies on the toad returning to the water at some period of its life.

Clearly there is much work to be done to examine the potential control by many of the other species of Euastacus crayfish, particularly before we consider biological control by other exotic species.

-oOo-

THE TRUSTING SUNBIRD

by T. FORD, Cairns.

1976: During the mid-nesting season for Olive-backed Sunbirds, I hung up a plastic cord two feet away from my front door. On the end of the cord was a tassle of grass roots and string. This offer was soon taken up by the local sunbirds always around the garden, who raised their family in the nest that they had built in the tassle.

1977: Very early in this season, sunbirds returned to the 1976 nest and did extensive renovations. Mother, being a little to energetic, kicked a hole in the side of the nest. This she kept filling and repairing with fluffy cane "tops". However these tops kept creeping out and forming a large ball on the outside of the nest. Mrs., I suppose, gave up in disgust at the repairs and went to build two half-hearted nests next door.

Meanwhile I extensively repaired the damaged nest by hand with grass, cobweb and nylon sewing thread, and relined it with cottonwool, feathers and old lining. I rehung the nest in a better sheltered and less windy position on the other side of the house. After about a month the sunbirds accepted my repairs and change of nest position, thereby giving a boost to my ego.

Mother Sunbird hatched two eggs in the aforementioned nest. As the youngsters grew there was, it appeared, a serious accommodation problem. Shortly before the final exodus, Mother at night was perched atop the babes at a sharp angle and must have found it difficult to stay in the nest.

I was away from home for six days, and on returning found that my kind neighbour had tended and sheltered the young birds at night and put them out during the day to be fed by the parents, who accepted this.

On my return one young lady was more or less airborne for short flights. Her sister, who I called Minim, was far behind in development; although feathered, she was quite bald and a mere 1½" long. My neighbour found her in the grass covered with ants. Put in a lined box, Minim seemed happy enough placed on my bird table with a sun and rain shelter. Mother continued to feed her regularly when I placed her outside early mornings, and took away the loose droppings from the box.

Deciding extra nourishment would help Minim along, I made up a diluted mixture of egg yolk, trace of honey and high protein powder. She was a little indifferent to this mixture at first, but with each subsequent feeding enjoyed it more.

Minim flitted a couple of feet at a time and gained strength rapidly. Her shelter was a large mulberry leaf tied in a small mango tree. This was also accepted by the parents, and Minim was joined by her sister, who huddled very close, supposedly offering warmth and encouragement.

A few days later Minim vanished without a trace, although her parents and sister remained in the garden. It seems she paid the ultimate price to some foe for not being amongst the fittest. Her slow physical gains indicated some possible small inborn defect. She was also failing to develop fast enough that notable characteristic of all small birds - extreme alertness. We can only hope that this latter defect was not aided by the human help, although this may be so.

The parents' trust remains as before. They raised their next family in the same nest.

-oOo-

THE HERBERT RIVER RINGTAIL POSSUM PSEUDOCHEIRUS HERBERTENSIS IN OPEN FOREST ON THE ATHERTON TABLELANDS

by RUPERT RUSSELL, P.O. Box 54, Herberton.

The Herbert River Ringtail Possum is generally considered to be a rainforest animal, which makes repeated sightings of two of these possums in open forest, 10 km south-west of Herberton, a matter of considerable interest.

The forest is dominated by tall Eucalyptus grandis, with numerous large E. resinifera and E. intermedia in the area, along with numerous Syncarpia gomulifera. Understory is comprised almost entirely of a species of Casuarina, probably C. torulosa. The forest floor is covered in either soft grasses or low growing ferns.

Two Herbert River Ringtails were first sighted on 8-11-78. One was seen on 27-12-78 and the other on 8-1-79. Both were seen on 9-1-79, when one animal was observed feeding on the mature leaves of _Eucalyptus intermedia_, the Pink Bloodwood.

Both animals are of adult size and appear to be in excellent condition. That they are living in the forest described and not simply making forays into it can be established by the fact that the nearest rainforest, by crowflight, would be at least one kilometre away, and further, the animals have twice been seen just after dusk.

Reports of any open forest sightings of this species by any reader will be welcomed by the writer.

-oOo-

SUCCESSFUL NATURE DISPLAY

by MARION CASSELS.

Following on the success and interest shown in our Natural History Display held in 1977 at the Raintrees Shopping Centre, it was decided to hold another display last year. As $192 was made from sale of plants at the first display, it was agreed to once more pot plants for sale. We tried to propagate as many native plants as we could to encourage people to grow natives in their gardens.

Members with slides and films selected their best ones and these were shown with a taped commentary giving a wide coverage of local fauna and flora. On wire screens many lovely photographs and posters were displayed all trying to show people the wonders of the North. Another display was of bird feathers (collected from road casualties) with a short note at the top explaining a little about the make-up and use of feathers.

At the back of the stage a small rainforest was created with potted rainforest trees, epiphytic ferns hanging on screens and the floor covered in forest litter. At the front of the stage were cases containing moths, butterflies and several live snakes; also jars of different species of local mangroves. In another corner was a display of shells and crabs and at the back of the stage was a large box in which was the reflected image of the most dangerous animal in the world - man.

At the counter were T-shirts printed with our grass tree emblem, plus cards of feathers, wood roses, minerals and other odds and ends. A raffle was run with a polished timber planter stand as prize.

The members were well rewarded for their efforts. Apart from the fact that over $1000 was raised (with about $200 expenses), the management of the shopping complex was happy with it all and asked for another one for next year.

Thanks go to all the members who worked so hard to make this such a success and give us for the first time in many years, financial security for some time to come.

-oOo-

NEWS ITEM: The marine parks section of the Queensland Fisheries Service has acquired the Green Is. residence and laboratory of the late Noel Monkman. Marine Park rangers will be on duty on a regular basis providing reef walks and slide shows in addition to their regular daytime activities.

THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES PART IX

by JAMES A. BAINES

Note: STCN = Standard Trade Common Name
PCN = Preferred Common Name

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Erratum: In Part VIII, *Diospyros* appeared as *Diospryos*.

Diploglottis. Gk diploos, double; glottis, the mouth of the windpipe; double-throated, the inner scale being divided into two. Q. has two species, known as Native Tamarind and Wild Tamarind. Fam. Sapindaceae.

Dissiliaria. Lat dissilio, fly apart, burst asunder (from salio, leap or jump); name given by Mueller because of the complete bursting of the capsule. *D. baloghioides*, STCN Redheart, is also known as Hauer, Blackheart and Lancewood. The specific epithet honours Dr. Joseph Balogh (see *Baloghia*). Euphorbiaceae.

Doryphora. Gk dory, a spear; phoros, bearing; alluding perhaps (says Francis) to the bristle-like points of the anthers - Bailey describes 'filaments ... with a winglike appendage on each side'. *D. aromatica* is Grey or STCN Northern Sassafras; *D. sassafras*, STCN Sassafras, Yellow or Canary Sassafras, is a N.S.W. species found in Q. only in far s.e. Sassafras comes from Lat saxifraga (saxum, stone; fraga, break) through Ital. sassifraga and Span. sasafras; a N. American tree whose present valid name is *Sassafras albidum*, White Sassafras, was so named because its bark produced a medicine similar in its effects to Saxifrage, i.e. used to 'break stones' in the bladder, cf. spleenwort. The Aust. trees were named thus because they had similar fragrance and properties to the American trees, which are in fam. Lauraceae. Oliver's Sassafras, *Cinnamomum oliveri*, STCN Camphorwood, is in Lauraceae, but both *Doryphora* and *Atherosperma* (Southern Sassafras) are in Monimiaceae. (The medicinal oil of sassafras is obtained only from the American trees.)

Dracaena. Gk drakaina (fem. of drakon), dragon; hence Lat draco and the English words dragon and draconian. The name was given because of the inspissated juice exuding from the trunk of some species, originally *D. cinnabari* of Socotra, but most famous the Dragon's-blood Tree or Dragon-tree of Teneriffe, *D. draco*. Q.'s sole species, *D. angustifolia*, is shared with the Indo-Malaysian region, but there are 150 species altogether in the world. Fam. Agavaceae.

Drimys. Gk drimys, pungent, piercing; alluding to the acridity of the plants. The genus was set up by J.R. & G. Forster in 1776. Very recently, R. Brown's *Tasmannia*, established 1818, has been preferred by some botanists for Aust. species because of differences thought to be generic. Cause, Weatherhead & Kynaston, in 'The Nomenclature, Density and Lyctus-susceptibility of Q. Timbers' (Q. Dept. of Forestry Pamphlet No. 13), include Mountain Pepper as *Drimys lanceolata*, whereas Northern Pepper-tree is listed by Hyland and in 3rd. edition of Francis as *Tasmannia membranea*, which W. Vink in 1970 lumped with 30 previously recognized New Guinea Highlands species as a highly polymorphic and widely dispersed species, *D. piperita* (type species from Mt. Kinabalu in Sabah, Borneo) - this was cited by Willis in 'Handbook to Plants in Victoria', Vol II.

Dryadodaphne. Gk dryas (genitive dryados), wood nymph, dryad; genus *Daphne*; originally described in Lauraceae but transferred to Monimiaceae in 1923 by Spencer Moore, who doubtless coined the name because it seemed like a forest Daphne. (The mythical Daphne, pursued by amorous Apollo, prayed for aid and was changed into a laurel-tree, thenceforth called daphne in Greek.) *D. trachyphloia* is known as Ladei or PCN Grey Sassafras, a name it shares with *Doryphora aromatica*,. q.v.

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CONTENTS

Yellow-bellied Glider (Petaurus australis) in North Eastern Queensland
by J. W. Winter, R. A. W. Russell & E. M. Winter ... 2

Interactions between various individuals of a Fluffy Glider (Petaurus australis) colony
by Rupert Russell ... 4

A Brief Study of Hermit Crabs
by Michael Tung Yep ... 5

Eurycles amboinensis — the so-called Cardwell Lily
by Keith Kennedy ... 7

Origin of Generic Names of Queensland Rainforest Trees Part X
by James A. Baines ... 8

Each author is responsible for the opinions and facts expressed in his or her article

A SIGHTING OF THE YELLOW-BELLIED GLIDER
(Petaurus Australis) In North-Eastern Queensland

by J. W. Winter*, R. A. W. Russell, and E. M. Winter**

The yellow-bellied glider (Petaurus australis) is the second largest of the Australian gliders and is generally considered to be a species of south-eastern Australia, extending as far north as Rockhampton. In the 1930's, however, several specimens were collected in the Cairns hinterland with published locality records from Herberton (Finlayson 1934) and Mount Spurgeon (Tate 1954). There has been no further record of this most northerly population.

We sighted the glider on 28 December, 1977 on the Herberton Range (17°19'S, 145°23'E, altitude 1000m) 9km south west of Atherton. It was in an area where cuts on the trunks of trees, suspected to have been made by yellow-bellied gliders, were seen (see Wakefield 1970 on this behaviour.) At about 20.00hr on a calm clear night, we heard a three-syllable 'wheck-woo-whrrig' call, the last syllable being the longest and most like the 'self starter' call of the sugar glider (Petaurus breviceps), but deeper in tone. The call was repeated at about five minute intervals, and on the third occasion two individuals, 50 to 100m apart, called, one apparently answering the other.

Soon afterwards a yellow-bellied glider was sighted. It was 6m off the ground in a forest oak (casuarina torulosa), but quickly jumped about 2m on to the trunk of a red stringy bark (Eucalyptus resinifera) about 30m tall and with a trunk diameter at breast height of 80-100cm. The glider immediately started to lick the exudate from cuts previously made in the bark, allowing excellent views of the glider for the half hour that we watched it.

The glider spent most of the time licking and chewing at the bark in the region of two cuts 5 to 10cm from each other. First the glider fed from above the cuts in a head down position, the hind legs splayed out to the side and with the feet turned back and upwards, whilst the front legs were pointed diagonally downwards to act as a brace. It then rotated its body to hang below the cut with all four legs pointed diagonally upwards. It moved over the trunk in a slow crawl.

Both cuts appeared to have been made through to the wood and were surrounded by an area of about 50cm in diameter from which the surface bark had been stripped to expose the more rufous underbark. Dark brown streaks below one of the cuts were apparently made by the exudate from the wound. For awhile the glider chewed at the fresh fibrous bark to one side of a cut and about 5min later a dark brown stain was seen at that point. Presumably this was the beginning of a fresh cut. It also moved further away from the cuts for a short period and began to strip off the brown outer bark in an untouched area, mostly by a pulling action with the teeth, but once it appeared to use a chisellike action of the lower teeth.

While the glider was feeding a second individual called twice from another tree. The feeding individual responded to the first call by pausing and giving a similar call, but gave no apparent response to the second.

Several, but not all, red stringy bark trees in the area had cuts in the bark on the trunk. These trees were liberally covered with cuts only 10-15cm apart, coming to within 1m of the ground and extending upwards to the first major branches. Above this the cuts were not nearly so numerous. On any one tree the cuts ranged from fresh ones oozing fluid to old ones closed over by scar tissue (Fig. 1). Trees bearing scars stand out as much more rufous because the brown surface bark has been flaked off by the activity of the gliders. Cuts were not seen on any other species of tree.

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The observations were made in tall open forest, type 14b, (Tracey and Webb 1975), which fringes the western edge of the rainforest. The main tree species present were red stringy bark, flooded gum (E. grandis), a bloodwood (E. intermedia), turpentine (Syncarpia glomulifera). with an understorey of forest oak and Banksia integrifolia. The stinging tree (Dendrocynide sp.) was present also. Ground cover consisted of ferns and grasses with wild ginger (Alpinia sp.) present.

The general appearance of the glider was of a smokey brown animal with a black stripe down the back, black stripes on the thighs set off by lighter fur on the hindquarters, black feet, pointed, pale grey naked ears, a pink nose, creamy-white underside, and a long bushy tail with a black end (see appendix for detailed description).

Pointed, virtually naked ears, dull red eye shine, and a dark stripe down its back, easily distinguish the yellow-bellied glider from the similar-sized greater glider (Schoinobates volans) which has rounded, fur-fringed ears, brillinat yellow eye shine and a uniformly coloured back. The yellow-bellied glider's larger size and smokey brown colour disdistinguish it from the smaller and greyer sugar glider and squirrel glider (Petaurus norfolcencis).

Other vertebrates seen on the night of the observation were the longnosed bandicoot (Perameles nasuta), the common ring-tailed possum (Pseudocheirus peregrinus), the greater glider, and the leaf-tailed gecko (Phyllurus cornutus).

Since this first sighting, several others have been made by the authors in the Herberton district. Readers' observations on the glider or the cuts it makes on tree trunks, with details regarding date, locality, type of forest, and behaviour would be welcomed.

References:

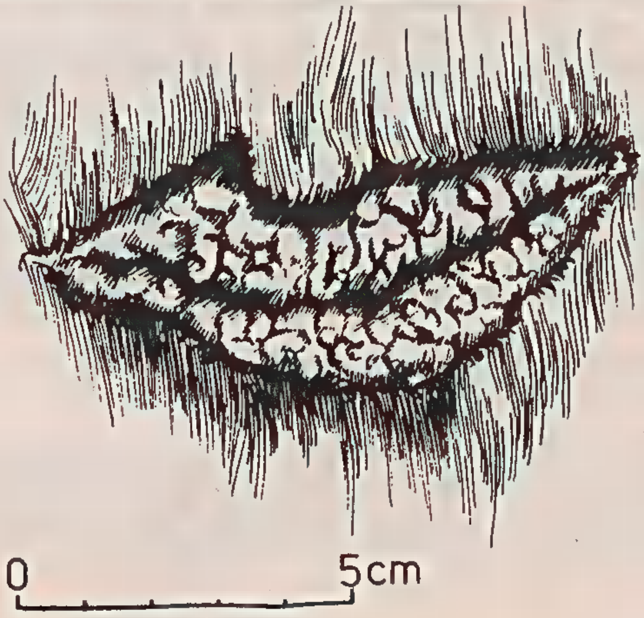
FINLAYSON, H. H. (1934). On mammals from the Dawson Valley, Queensland. Part II. Trans. Roy. Soc. S. Aust., 58: 218-231.

TATE, G. H. H. (1952). Results of the Archbold Expeditions. No. 66. Mammals of Cape York Peninsula, with notes on the occurrence of rain forest in Queensland. Bull. Amer. Mus. Nat. Hist., 98: 563-616.

TRACEY, J. G. and WEBB, L. H. (1975). Key and 1:$00,000 maps to the vegetation of the humid tropical region of North Queensland. Rain Forest Ecology Unit, Division of Plant Industry, C.S.I.R.O. Long Pocket Laboritories, Indooroopilly, Q.

WAKEFIELD, N. A. (1970). Notes on the glider-possum, Petaurus australis (Phalangeridae, Marsupialia). Vic. Nat. 87: 221-236.

Figure 1: Feeding cut with scar tissue in the bark of E. resinifera. Drawn by K. Russell.



APPENDIX — Detailed description of glider seen.

General colour was a smokey brown dorsally, darker on face, crown and nape, narrowing to a mid-dorsal stripe extending to the rump, becoming paler each side of the stripe until almost a light cream in the lumbar region; forefeet and arms were black; hind feet black with the black continuing as a stripe along the trailing edge of the limb when spreadeagled; on leading edge of hind limb and apparently running from knee to body was a narrow very distinct black stripe bordered by pale cream, posteriorly on the limb and anteriorly on the gliding membrane; dorsally anterior half of gliding membrane was darker than general body colour, posteriorly a light creamy yellow with an abrupt change between the two halves; underside of gliding membrane was creamy white, contrasting strongly with darker dorsal surface; tail was smokey brown proximally, becoming progressively darker until the distal one third was black; tail was approximately one and one-third as long as the head-body with a broard fluffy base; back of ears was pale whitish grey with distinct black crescent around base, apparently naked, paler inside; face was darker than body with no apparent face pattern except distinct pink tip of nose; under chin was pale creamy white.

* * * * * *

INTERACTIONS BETWEEN VARIOUS INDIVIDUALS OF A FLUFFY GLIDER (PETAURUS AUSTRALIS) COLONY ON THE ATHERTON TABLELANDS

by RUPERT RUSSELL, Herberton. 29.2.79.

The Fluffy Glider or Yellow Bellied Glider (Petaurus australis) occurs in certain areas of heavily timbered open forest country on the Atherton Tablelands. One colony, in which six individuals have been recorded, has been the subject of observations by the author and various companions at various times since the first observation at this colony site on 28.1.78.

The Fluffy Glider seems to be strongly gregarious, at least in the middle months of the year; as they spend a good deal of their time feeding on the kino of a certain Eucalypt (E. resinifera on the Tablelands) they can be watched at fairly readily observable heights. As many as five Fluffy Gliders have been observed feeding or moving about on a single E. resinifera tree, even though other suitable trees were situated nearby.

A commonly observed interaction between two Fluffy Gliders is what I am obliged to call the "Forehead-to-cloaca address". This form of address is conducted by an initating animal approaching the rear of a recipient, thrusting its muzzle beneath the recipient's tail and then rubbing its forehead vigorously against the recipient's cloaca. At times the initiator of this address will place a forepaw against the other's rump,or against the root of its tail. Almost without exception the recipient is fully tolerant of the address, only very occasionally making a rapid evasive action. Quite often the recipient will turn about at the conclusion of the performance, in order to deliver the same form of address to the animal which has just completed the ceremony. A Fluffy Glider may address more than one animal in the course of a night, and at times one animal, while addressing another, is itself addressed by a third.

On three occasions a Fluffy Glider has been observed taking the tail of a nearby conspecific in its forepaws and grooming it with the mouth.

A Fluffy Glider will occasionally pursue another in a non-aggressive manner. On one such instance the fugitive animal was chased out onto a thin branch, from where it turned back and was confronted by the pursuer. Next both animals were seen hanging from the branch by their hind legs, while they wrestled or cuddled in a non-aggressive way for about fifteen seconds.

A pair of Fluffy Gliders were observed mating on 28.1.78. They were clinging to the underside of a leaning bloodwood limb about six metres above ground. During the course of mating both animals slipped from the limb and fell about two metres before rolling in the air and alighting on a Casuarina limb which they found to be in their downward route. The pair then crossed to the bloodwood on which they had first been sighted, and went amicably up the trunk.

Very few instances of aggression were observed during 1978, but a persistent chasing of one male, third in rank within the area, by the dominant male of the group has been observed in January and February of 1979. The pursuit of the low ranking male has at times led to this amimal's falling from heights of 6 to 8 metres without it being able to glide out of the fall, while at other times both males have fallen together, broken apart in the air, and both glided off to nearby trees. The middle order male is pursued by the dominant animal, and in turn pursues the lowest ranking male. Recognition of these three animals is possible at distances of 3 metres, and their sex has been determined by visual examination of the animals either when caught (two of the males) or when viewed form a suitable angle, while the glider is grooming itself on a tree.

The lowest ranking male usually drives females away from feeding sites on favoured trees, and is consequently not the recipient of any forehead-to-cloaca addresses, but the more senior males rarely do more than nudge a female away from a feeding site. Females tend to resist an attack with screeches or slaps, and are rarely pursued for more than a few metres, though males may be pursued through successive trees.

When a Fluffy Glider is descending a tree on which another is already feeding the newcomer utters a panting sound throughout the descent, possibly as an appeasement call.

* * * * * *

A BRIEF STUDY OF HERMIT CRABS

by MICHAEL TUNG YEP

(Winning entry in a Natural History Essay Competition conducted throughout Cairns district schools by N.Q.N.C.)

The hermit crab is a common and most interesting animal found on many of North Queensland's beaches. The following study has been pieced together from various observations made in the Cairns area.

Probably the hermit crab's means of locomotion is what first attracts the attention of any casual seashore observer. The hermit crabs use the first two legs on each side and often their claws to move along. The rear legs are much less developed and if used at all would possibly be for anchoring the animal to the shell. The crab's movements could be described as "jerky", in that the legs reach out, take a hold, then the animal drags itself and its shell forwards; then begins again. The progress is slow and looks difficult and awkward.

If attacked the crabs retreat into their shells, blocking the entrance with their claws and legs. This makes them almost impossible for most predators to get at.

The crabs do not seem to have many predators. Some wading birds pecked the shells containing hermit crabs when they were exposed at low tide, but with little success. At high tide they were covered in about forty-five centimetres of water. Baited lines thrown out from the beach were readily taken by whiting fish, but the stomach contents of eleven of the fish of different sizes revealed no identifiable traces of hermit crabs.

The only other predators observed were Man and other hermit crabs. Man (the term of course includes women and children) all too often needlessly destroys hermit crabs to obtain the colourful shells they occupy.

On a few occasions hermit crabs displayed cannibalistic behaviour which may have been for the express purpose of obtaining food, or as in one case, for the food and also the shell. This type of behaviour however probably occurred only as a result of necessity rather than common practice. The crabs tended to live in large groups where they were in close proximity to each other.

All of the crabs observed were seen picking up grains of sand and pieces of algae with their claws and placing them in their mouth region. The sand was always discarded. It is possible that the crabs obtained algae from it though there was little or no algae to be seen.

The food which hermit crabs ate included dead fish, shrimps, starfish and algae. In the main the crabs could be described as bottom dwelling scavengers. Hermit crabs appear to be able to sense the presence of food as they readily moved towards pieces of prawn placed in their pools. Both small and large hermit crabs inhabited the pools and were found together almost everywhere. An interesting occurrence was that while pieces pf prawn attracted the larger hermit crabs, the greater majority of smaller crabs shied away. This was tried a number of times with similar results. Surprisingly a number of the small crabs kept in a tank did eat pieces of prawn meat and fish flesh.

Weather conditions did not seem to greatly affect the hermit crabs. There seemed to be just as many at low tide on a fine sunny day as there were on an overcast drizzling day. When approached on a fine day all the crabs would start crawling away while a few would retreat into their shells. On the wet days more preferred to stay where they were. Possibly a lower level of salinity due to the rain affected the crabs. It might also have been hard for the crabs to see if the water droplets were continually disrupting the water surface.

The abdomen of the hermit crab is soft while the head and legs are covered in a strong hard exo-skeleton. Since this structure does not grow, it is shed from time to time as the crab grows. Though not observed on the field, two hermit crabs "moulted" in the study tank. The complete outer covering of the crab is discarded, and a new slightly larger one hardens after a short time.

An amazing occurrence was observed in that one of the captive crabs possessed only three legs having lost one possibly in a fight. After it had moulted, it had regrown a new leg!

The soft abdomen of a hermit crab needs to be protected if the organism is to survive. For this reason, hermit crabs are constantly searching for shells in which to make their new homes. After locating an empty shell the crab withdraws its abdomen and inserts it into the new shell. If it is satisfactory, it discards its old shell and moves off.

The hermit crabs studied all lived on sandy and slightly muddy beaches usually in wide and open areas, exposed at low tide and covered by water at high tide. Possibly this enables them to obtain food at low tide after it has been stranded by the receding waters. The high tides would constantly wash in organic debris, also shells which the crabs use. Thus the habitat provides food, shelter, and a suitable climate, which make up for awkwardness of movement and inability to make a speedy escape from danger.

Not only is the hermit crab a hardy animal, well adapted to its enviorment, it is the sea's own comic.

EURYCLES AMBOINENSIS — *THE SO-CALLED CARDWELL LILY.*

by KEITH KENNEDY, Townsville.

Of late years it has become fashionable to cultivate Australian plants as well as exotics. This is all to the good, for they impart an Australian atmosphere whereas previously most gardens were imitations of those in Europe.

Mostly grown are shrubs of the Proteaceae, Leguminoseae and Myrtaceae families. Of those suitable for the bush-house or indoors very few have been cultivated, perhaps because there are not many.

One suitable for the bush-house is the so-called Cardwell Lily, which is not a lily but belongs to the family Amaryllidaceae, and it grows not only in the Cardwell district but in other parts of North Queensland. The writer has seen it growing on Magnetic Island where, of course, it is strictly protected. The specific name amboinensis tells that it also grows on the island of Amboyna in the East Indies, from which the first specimens were apparently collected and named. Bailey in "Comprehensive Catalogue of Queensland Plants," 1909, p. 543, mentions that the name given it by the Cardwell aboriginals was BITOMAN, and gives the initials of his informant as R. B. H. Under the law of priority, if applied to vernacular names, this is more suitable than Cardwell Lily.

It is a bulbous herb which dies down and perennates during the short tropical winter. When the rains come, the leaves emerge and then a scape rises to a height of about 50 cm. terminated by an umbel bearing white flowers which are shortly tubular, lobed and 4 to 5 cm. long. At first the umbel is enclosed in a membranous spathe which, however, quickly disintegrates. Flowering month in Townsville last year was December because of early rains.

The bulb is tunicated which means that the leaf scales which enclose the short underground stem cover each other as in the case of an onion, so it is easy to identify. The leaves, which are radical arising from the crown of the bulb, are a pleasing green and an ornament to a bush-house, for they have a petiole longer than the blade, giving an unusual "shovel" appearance. The blade is broadly cordate. The surface is slightly undulated.

There are few seeds in the succulent fruit, often only one, although botanically it is still a berry, which falls off while still green. The writer planted two green berries on 26 Dec. 1978, and one germinated on 30 Jan. 1979. Propagation can also be from the increase of bulbs. In the tropics they can be planted in a rockery, but do better in pots about 25 cm. across. For temperate climates they need a hot-house with a temperature similar to that which suits dendrobiums or similar orchids.

There is a sub-tropical species, E. cunninghamii, named after the botanist-explorer Alan Cunningham, collected from the Brisbane River district and as far north as Rockhampton. This species has leaves that are not cordate but ovate. It should be more adaptable for growing in the cooler parts of Australia.

References: Bailey, "Queensland Flora", 1902, pp 1612-3.
Bailey, "Comprehensive Catalogue of Queensland Plants", 1909.

* * * * * *

Note on Toad Predators from an old friend in the Gilbert River area:
Crows pick up a toad by a leg, fly high and drop it; the body splits open and the edible sections of the body are then eaten. We know how intelligent crows are... Toads' vitals must be good to eat?

Frank Moody, J. P., Cairns.

THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES — PART X

by JAMES A. BAINES

Note: STCN = Standard Trade Common Name
PCN = Preferred Common Name

Drypetes. Gk drypetes, ready to fall from the tree, ever-ripe (drys, tree). D. australasica, Grey Boxwood, is also known as Yellow Tulip or Yellow Tulipwood, the grey bark when cut becoming yellow resembling that of Tulipwood, Harpullia pendula. Another species is called Iodoform Tree, probably because of its odour. (Iodoform is a compound of iodine with a smell of saffron, used medicinally). Fam Euphorbiaceae.

Duboisia. Named by Robert Brown in 1810 after Louis Dubois, who wrote in 1804 on fruit trees, or Frederic Dubois, who wrote a histroy of medicinal plants (460 pp., 1848). Duboisia has for a long time been well known for powerful drugs obtained from the three species, including pituri from the inland D. hopwoodii. In Q. rainforests D. myoporoides, STCN Duboisia, a corkwood, produces hyoscine, and a Q. endemic, D. leichhardtii, produces a predominance of hyoscyamine. Fam. Solanaceae.

Dysoxylum. Gk dys-, inseparable prefix denoting bad, difficulty, trouble; xylon, wood; Francis gives dysosmos, evil-smelling, alluding to the disagreeable odour of some species. Sometimes spelt Dysoxylon, but Blume in naming the genus used a latinized form. N.Q. has D. schiffneri, Yellow Mahogany, D. pettigrewianum, STCN Spur Mahogany or Spurwood, D. oppositifolium, Pink Mahogany, D. muelleri, STCN Miva Mahogany, Red Bean or Onionwood, and D. rufum, STCN Rusty Mahogany; while D. fraseranum, STCN Rose Mahogany or Rosewood, reaches Q. only in far s.e. Meliaceae.

Ehretia. Named by Linnaeus after his friend Georg Dionysius Ehret (1710-1770), German botanical illustrator in England, who illustrated his 'Hortus Cliffortianus'. E. acuminata, STCN Silky Ash or Koda, and E. membranifolia, Peach Bush, are N.Q. species. Fam. Boraginaceae.

Elaeocarpus. Gk elaia, olive; karpos, fruit; from the appearance of the fruit. E. reticulatus, STCN Ash Quandong, Blueberry Ash or Blue Oliveberry, ranges from Fraser Is. to e. Vic.; E.holopetalus, Black Oliveberry, is confined to sub-tropical scrubs of N.S.W. and e. Vic.; and Q. has a number of species known as different kinds of quandong, e.g. E. grandis, STCN Silver Quandong or Blue Quandong. This large genus of 200 mainly tropical species, gives its name to fam. Elaeocarpaceae, which includes Sloanea and Aristotelia, 350 spp. in all.

Elaeodendron. Gk elaia, olive; dendron, tree; because of resemblance to the olive trees of commerce, Olea europaea. Francis lists two N.Q. species. E. australe is PCN Blush Boxwood. Fam. Celastraceae.

Elattostachys. Gk elatton (attic form of elachys), small, mean; stachys ear of grain, spike. Francis has no common name for the two Q. species he lists, but E. xylocarpa is STCN White Tamarind. Fam. Sapindaceae.

Embothrium. Gk en- (em-), prefix meaning in; bothrion, a little pit (dim. of bothros, hole or trench); referring to the pitted anthers. E. wickhamii, STCN Satin Oak or Red Silky Oak, listed by Bailey, is now Oreocallis, as is C. T. White's E. pinnatum, STCN Dorrigo Oak or Q. Waratah Tree (now O. pinnata). Fam. Proteaceae.

Emmenosperma. Gk emmeno, I remain in, cleave to (em-, in; meno, stay); sperma, seed; alluding to the way the seeds often remain on the axis of the fruit after the fruit valves have fallen away. E. alphitonioides (= like Alphitonia, q.v.) is STCN Bonewood, Yellow Ash or Pink Ooline. Fam. Rhamnaceae.

Endiandra. Gk endon, within; aner, andros, a man; alluding to the inner series of stamens (the male organs) being the fertile ones. E. discolor is STCN Rose Walnut or Domatia Tree. — from the 'domatia' (hollow glands) on the under surface of the leaves (see Willis' article under Domatia in 'The Aust. Encyclopaedia'). There are at least a dozen other Q. species including Q. Greenheart and Q. Walnut. Fam. Lauraceae.

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The NORTH QUEENSLAND NATURALIST

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CONTENTS

Obituary — Miss Katherine Joan Morris 2
A Record of an Albino Rufous Rat-kangaroo (Aepyprymnus rufescens) by P.M. Johnson and T.R. Aaskov 2
Ghost Bat and Death Cries from the Rainforests of McIlwraith Range, Cape York Peninsula by S. van Dyck 3
Book Review — Rupert Russell's "Spotlight on Possums" by N.C. Coleman 5
A Note on the Mother-offspring relationship in the Herbert River Ringtail possum, (Pseudocheirus herbertensis) by Rupert Russell 6
Atpheus edwardsi — The Pistol Prawn by Barbara Collins 7
Web Construction by Portia — A Spider of the Family Saltacidae, Commonly known as Jumping Spiders by N.C. Coleman 7
Spathoglottis paulinae — A Queensland Terrestrial Orchid by Keith Kennedy 9
Wildlife at the Saunders Beach Dump by Rozanne Glazebrook 10
Our Fish Pets by Barbara Collins 11
The Origin of Generic Names of Queensland Rainforest Trees Part XI by James A. Baines 12

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20 AUG 1980
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OBITUARY

Miss Katherine Joan Morris

With the death in Cairns on August 24, 1979, of Miss Katherine Joan Morris, the North Queensland Naturalists Club lost a capable editor of fourteen years standing. Miss Morris, better known as Joan, joined the club in April, 1962 and became its honorary editor in September, 1965.

Despite serious physical handicaps which kept her confined to a wheel chair, Joan led a full life and was an inspiration to all who knew her. Helped by her devoted companion, Miss Dawn Keith, she lived in her own home in Whitfield, Cairns, where she organised the complex daily roster for Meals-on-Wheels. She was active in this work until a few days before her death.

For years she transcribed articles and books into braille for the blind, later using a special braille typewriter presented to her by the Inner Wheel Club of Cairns. The many native trees and wildflowers in Joan's garden were evidence of her knowledge and love of nature. The Cairns Historical Society was another of her many interests.

Joan gave freely of her time, talents and means to help various charities, and as the Rev. Father Roberts said at her funeral at the Good Shepherd Church of England, "With all her limitations, she used every gift and ability she had, and said 'yes' to life".

A RECORD OF AN ALBINO RUFOUS RAT-KANGAROO (AEPYPRYMNUS RUFESCENS)

by P.M. Johnson* and T.R. Aaskov**

Little has been recorded on the occurance of albino macropodids in the field. The following record is of an adult male rufous rat-kangaroo (Aepyprymnus rufescens Gray) found as a "road kill" on "Lavinia Station" south of Sarina and forwarded in alcohol as a specimen to the N.P.W.S. Northern Regional Centre, Pallarenda, Townsville.

When found, the irises of the eyes were red in colour. The fur of the body, with the exception of the tail and hind-feet, was whitish-cream. The tail and hind-feet were a pale grey (probably due to staining by soil). Measurements were as follows:- Total length - 71.2 cm; tail - 36.4 cm; hind-feet - 13.2 cm; weight 2.1 kg.

The specimen has been retained in the reference collection at the Northern Regional Centre.

* Queensland National Parks and Wildlife Service, Townsville
** Queensland National Parks and Wildlife Service, Mackay

GHOST BAT AND DEATH CRIES FROM THE RAINFORESTS OF MCILWRAITH RANGE, CAPE YORK PENINSULA

by S. VAN DYCK, Queensland Museum.

The Ghost Bat (Macroderma gigas) has previously been recorded from ten localities in Queensland (Dwyer 1968, Queensland Museum records and pers. comm. P.D. Dwyer, regarding skeletal remains found at Mt. Surprise). It has been found as far north as Helenvale, Cape York Peninsula, where Dwyer (1968) indentified a Ghost Bat carcass displayed in the Lion's Den Hotel and Boles (Marlow and Boles 1977) netted five adults at the Annan River in "Dry Gallery Rain Forest".

The capture of an individual at Attack Ck (13°30'S, 143°15'E) approximately 45 km north of Coen extends the Ghost Bat's range in Queensland by 350 km northwest (Fig. 1).

The single male (Qd Mus. JM 2380) was collected at 11.30 p.m., 18 August 1978, in a sixty-foot mist net stretched across Attack Creek, an eastern tributary of the Archer River. The shallow creek is bordered on either side by a narrow belt of semi-deciduous mesophyll vine forest on riverine alluvia. Away from the creek the vegetation changes abruptly to Eucalyptus tetradonta - E. sp. aff. polycarpa woodland and E. cullenii - E. dichromophlora low woodland (Pedley and Isbell 1971).

Although an attempt was made to maintain the animal live in captivity, it became moribund, refused to eat and died after two days. Particulars are as follows: adult male; weight 105 g; length of forearm, 105 mm; head and body (vent) 122.5 mm; ear (n), 50.5 mm; testes development, large, scrotal; colour, back, grey, tipped by fawn; chest and belly, grey tipped by cream. Tooth wear indicates JM 2380 to be relatively old.

There are few published accounts of the behaviour or ecology of Ghost Bats. Dwyer (1968) notes some aspects of breeding behaviour in a small colony at Mt Etna in mid-eastern Queensland and Douglas (1967) provides detailed descriptions of reproductive, hunting and feeding behaviour of Ghost Bats in northern Western Australia. There are several accounts of Ghost Bats eating other species of small bats. Wood Jones (1923) examined the gut contents of mummified Ghost Bats and found masses of insectivorous bat hair. Douglas (1967) observed a Ghost Bat swoop on a wounded Sheath-tailed bat (Taphozous georgianus) and collected remains of the following food species in a roosting cave of Ghost Bats: Little Bats (Eptesicus pumilus), Common Sheath-tailed Bats (Taphozous georgianus) and Bent-winged Bats (Miniopterus schreibersii). Other small bats are known to form part of the prey of carnivorous bat species in tropical Africa and South America (Vaughan 1976, Greenhall 1968).

I regularly heard nocturnal distress screams from small bats while collecting in semi-deciduous mesophyll vine forests at Iron Range, Attack Creek and Buthen Buthen in Cape York Peninsula and I suspect these cries were a result of attacks by Ghost Bats. The cries resembled the sibilant shrieks made by Blossom Bats (Syconycteris australis and Macroglossus lagorchilus) when they are being disentangled from mist nets. They were heard frequently from above and from below the vine-forest canopy and were usually stifled after one or two seconds. Two large unidentified bats were seen in conjunction with screams at Buthen Buthen and one large unidentified bat flew over my head in response to imitated screams at Attack Creek.

At Iron Range, remains of azure kingfishers (Alcyone azurea) were found at dawn in tattered tangles of mist nets that were stretched across rivers. At Buthen Buthen the head of a rufous fantail (Rhipidura rufifrons) was found in a mist net stretched across a dry bed of the Nesbit River. These predatory raids could have been the work of Ghost Bats although it is noted that water rats and species of marsupial mice which occur in these areas could also have been the culprits.

Factors affecting the distribution of Ghost Bats have often been discussed. Wood Jones (1925, 444) supposed that increasing desiccation in northern South Australia "... made the obtaining of sufficient food impossible for a powerful and volant animal". Butler (1961) proposed that, in Western Australia and South Australia, the Ghost Bat is a desert adapted animal which, with increasing humid conditions in the south west, was forced to shift to drier areas in the north (see also Ride and Serventy 1965). Hamilton-Smith (1966) suggests that in Western Australia its distribution may be limited by food supply and, as Douglas (1968) emphasizes, more importantly its accessibility to the bat. The presence of the Ghost Bat in Cape York Peninsula rain forests indicates that it is capable of existence under both extremely arid and extremely wet conditions.

The past and present status of Queensland and Western Australian Ghost Bats cannot be simply reconciled. It is possible that, by virtue of the harsh nature of some of its occupied habitats, it lives on a perilous balance between energy income and expenditure, the result of which in a few cases has meant the complete or partial disappearance of the bat from some areas.

Acknowledgments

I am indebted to Mr. G. Czechura (Queensland Museum) for checking the mistnet and restraining the Ghost Bat as it was escaping. Dr. P.D. Dwyer (University of Queensland) read and criticised the work and Miss R. Owens typed the manuscript.

Literature Cited

BUTLER, W.H., 1962. Occurrence of the Ghost Bat, Macroderma gigas, in the Great Victorian Desert, W.A. W. Aust. Nat. 8(1): 42-3.

DOUGLAS, A.M., 1967. The natural history of the Ghost Bat, Macroderma gigas in Western Australia. W. Aust. Nat. 10(6): 125-38.

DWYER, P.D., 1968. New records of the False Vampire Bat in Queensland Helictite 6(2): 36-40.

GREENHALL, A.M., 1968. Notes on the behaviour of the False Vampire Bat. J. Mamm. 49(2): 337-40.

HAMILTON-SMITH, E., 1966. The geographical distribution of Australian cave-dwelling Chiroptera. Int. J. Speleology 2: 91-104.

MARLOW, B.J., and W.E. BOLES, 1977. Confirmation of the occurrence of the Ghost Bat Macroderma gigas, (Chiroptera: Megodermatidae) in Cape York Peninsula, Queensland. N. Qd. Nat. 44(170): 3-4.

PEDLEY, L. and R.F. ISBELL, 1970. Plant communities of Cape York Peninsula. Proc. R. Soc. Qd 82: 51-74.

RIDE, W.D.L. and D.L. SERVENTY, 1965. The fauna of Western Australia, In Official Year Book of Western Australia, No.5. Ed. R.J. Little. Government Printer, Perth.

VAUGHAN, T.A., 1976. Nocturnal behaviour of the African False Vampire Bat (Cardioderma cor). J. Mamm. 57(2): 227-48.

WOOD JONES, F., 1925. The mammals of South Australia. Part III. Government Printer, Adelaide.

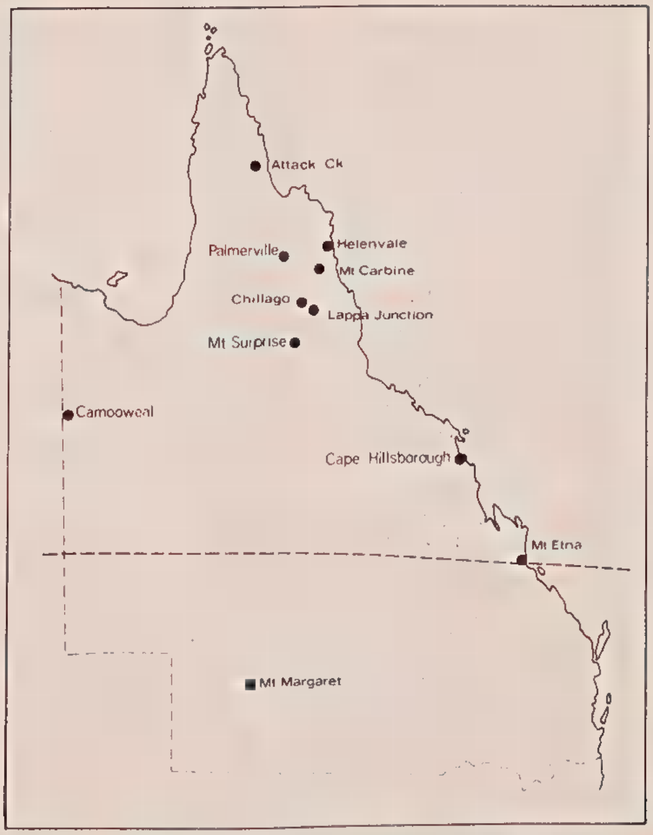

Fig.1. Distribution of the Ghost Bat (*Macroderma gigas*) in Queensland.

"SPOTLIGHT ON POSSUMS" BY RUPERT RUSSELL
Published by University of Queensland Press.

- N.C. Coleman.

This book reveals the patience and persistence of a dedicated naturalist in his studies of the life histories of North Queensland possums, a group of marsupials almost entirely nocturnal in habit, living in a variety of forest areas not conducive of easy observation. The descriptions of food preferences, the reflective colour of the eyes and the movements of the different species described by the author, plus the meticulous drawings by Kay Russell, make this a useful handbook for those who wish to learn more of the private lives of North Queensland possums.

A NOTE ON MOTHER-OFFSPRING RELATIONSHIP IN THE HERBERT RIVER RINGTAIL POSSUM, PSEUDOCHEIRUS HERBERTENSIS.

by Rupert Russell**

Repeated sightings of Herbert River Ringtail possums in open forest were reported in the N.Q. Naturalist, April 1979. One of the two animals is still seen at irregular intervals, and on 18th April it proved itself to be a female, for it was seen to be accompanied by two small, light brown joeys. The mother was sitting on a turpentine branch, with each joey making very short independent explorations of the limb occupied by the mother. The adult was uneasy due to my presence, and soon moved along the limb, both joeys on her back, to disappear from sight within a globular construction of leaves built at the core of a mistletoe clump growing on the turpentine. She did not emerge during the next several minutes of observation.

Two nights later the female left the nest in the mistletoe clump at 6.58 pm, unaccompanied by the joeys. She sat nearby, grooming and looking about, for the next 8 minutes, before moving off through the trees. Both joeys emerged from the same nest at 7.12 p.m. and moved about in the mistletoe clump and nearby branches of the home tree while under observation till 8 p.m. They made no attempt to track their departed mother.

The adult female was located alone on the nights of the 21st, 24th, 25th and 29th April, with her offspring always in the home tree, but venturing progressively further into various parts of the crown on successive nights. On the 30th April one juvenile was seen in a casuarina approximately 10 metres from the home tree. The mother was watched emerging and moving off alone by Dr. J. Winter* on 1-5-79, with the joeys coming out after her departure, as previously described. One joey was seen on the 5th May, away from the home tree; this was the last occasion on which either of the juveniles has been seen, possibly having both been lost to predation by a Rufous owl (Ninox rufa). A Rufous owl was seen on the 14th May, perched almost directly below the possum nest, and staring persistently upward, as though to descry any movement in the tree silhouetted against the sky. It flew off after about 15 minutes but returned later in the night to repeat its earlier behaviour. It is felt that both joey possums may have been taken by the owl during the period between May 5th and 14th, with the owl now back in the hope of discovering a further meal.

Discussion:

In rainforest habitats, particularly during the early summer months, it is not unusual to see, after dark, a very young Herbert River Ringtail joey sitting amidst thick undergrowth, often within 2 metres of the ground. The writer and other observers had been of the opinion that the young of this species have no more contact with their mother from an earlier age, developmentally, than is the case with other rainforest ringtail possums. Solitary individuals weighing as little as 156 grammes (compared to an adult weight of approx. 1000 grammes) have been recorded by Dr. J. Winter. The observations of nest sharing in an openforest habitat suggests that small joeys seen alone in rainforest might in fact return to share their mothers nest or den before dawn. It is unfortunate that the writer's observations of mother-offspring relations were cut short, presumably by a Rufous owl which might have benefited from the lack of thick undergrowth in which the joeys might otherwise have concealed themselves.

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ALPHEUS EDWARDSI - THE PISTOL PRAWN

by Barbara Collins.

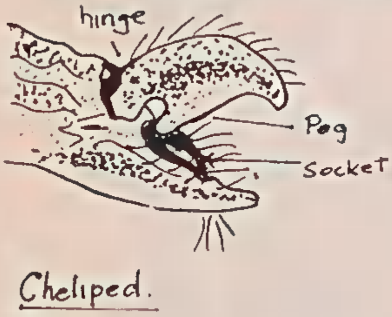
A pair had been with us for a long time, possibly in excess of two years. When we moved the aquarium, the female lost her large nipper (cheliped). After several successive moults she had fully regained it.

One evening I noticed a clutch of eggs beneath her tail, quite large, brown and spherical and obviously almost ready to be released. Later, the pair left their burrow and commenced excavating another, though apparently not to live in. The male took up a position behind the female while she dispersed the developed eggs, some of which appeared to have already hatched and jerked about like mosquito wrigglers, and brilliant silvery blue eye spots were visible. They both did a lot ot fanning of the sand with periodic rest periods and the male appeared to cover the area where the eggs had been dispersed with sand. Then they both fanned the sand above the spot maintaining water circulation.

In the morning I saw some larvae trapped in a pocket of sand against the aquariun wall. Whether this was intentional or not, I do not know. After three days the larvae were no longer visible and none have since been found. They were a little over 1 mm.

Shortly after, the female had another clutch of tiny spherical brown eggs but I missed the dispersal of these. Not long after, the male became "paralytic" and apparently died. Their burrow had been well established under a large flat slab and the sides had been blocked up with pieces of coral, shells and rocks and also spread about the entrance. This material not only came from their excavatings, but was transported from other parts of the aquarium. They shared their burrow with a File shell (Lima) with scarlet tentacles and frail white shell. Often if it was obstructing their entrance they would simply move it aside.

After the male's death, the female left the burrow and made no attempt to dig another, but would dig a shallow shelter only if threatened. One day I saw her curled up on the bottom of the aquarium and I thought she too was dying, then with a few violent twitches and wriggles she emerged in a new skin sporting a very formidable cheliped. The "snapping" sound produced by this appendage is made by contact of a peg striking the socket and is quite audible, sometimes alarming.



Cheliped.

WEB CONSTRUCTION BY PORTIA - A SPIDER OF THE FAMILY SALTACIDAE COMMONLY KNOWN AS JUMPING SPIDERS

by N.C. Coleman*

On the 24th February, 1980 a female was collected from the vertical face of a web about 18cm across, on a high rocky bank of a creek near Cairns, about 2.5 metres above the creek. A few photos were taken and the spider was collected for further study at home. It was placed on a small twiggy branch in a basin of moist sand and gravel and this was placed in a cage 38cm square which was covered with coarse cotton mosquito netting. A separate piece of this netting formed the door.

After a few minutes of flicking her palps and looking around she moved down her twig and up another one, trailing a fine silk thread as she did so. At about the same height as on the first twig she fastened the end of this thread to the second twig. Moving down about 10 - 12mm she dabbed her spinnerets on the twig and then moved up to and along the thread above her, trailing a second thread which she fastened to the first twig at about the same distance below. Straddling both these threads she moved back and forth several times between the two twigs, adding more silk to the two lines, and then formed a line between them in the same way.

From these first two twigs she constructed similar lines to several other twigs producing a tangled web of lines criss-crossing the first three. She then moved across and back in this tangle adding a maze of fine braces and struts connecting the main lines of the web and constricting it near its centre to something like an hour-glass shape. Moving to the top of the web the spider moved around its centre on the upper side in an uneven circular path. She did this more than a dozen times, laying a fresh thread on each trip and building up a thicker line than any yet made. The area of this was about that of a two cent coin and the encircling ring stood out clearly from the rest of the web.

The spider now started moving slowly back and forth over this area laying a fine band of gossamer-like silk over the support lines beneath and moving her abdomen from side to side. Later, she circled around near the enclosing ring, binding it to the fine sheet web within. On completion of this web she moved to the side of the web near the door and rested in a vertical, head down position, but in a few minutes she had moved back to the top of the web and raised her abdomen in the direction of the door (raising the abdomen in this way is usual among spiders when they emit silk for travel lines or webs). Watching closely, a fine thread could be seen drifting on the air within the cage and toward the cage door. A few minutes later the spider was on the netting of the door, about 10cm away from the nearest part of her web. Within the mosquito netting cage, which was inside my house, she had floated a fine strand strong enough to bear her weight (the spider is 9mm long).

In the next two hours she had constructed another web similar to the one on the twigs and was moving restlessly around the cage, probing into any corners of the timber and moving under the netting as though trying to get out.

At 4 p.m. I placed her in a large jam jar for safety and went out. Returning at about 11 p.m. I checked the spider and found that she had spun a slightly different web to those in the cage. It resembled a wheel with three very large spokes attached to the glass wall of the jar and with a hub having a circular, fine mesh web surrounded by a heavy thread. Each of the spoke-like arms was constricted in its mid section by a maze-like binding of fine silk and the web, which was made in the upper part of the jar about 1cm below the lid, was 4cm deep. The spider was resting upside-down in this web about 1cm down and to one side of the fine mesh web on top. Several photos were taken of her in this position with a ringlight and then a small live moth was dropped into the web. Its fluttering promptly attracted the spider which seized the moth and moved to the side of the jar below the web and, resting head down, started feeding.

This jar is 10cm deep, 6cm in diameter at the top and about 8cm at the bottom (all inner measurements). There are only a few small holes for aeration in the lid yet she managed to spin a circular web 4cm deep which was 6cm wide at the top and about 6.5cm across the bottom, and this was after she had already spun two sizeable webs less than twelve hours earlier. All of these were constructed in artificial conditions.

In their natural surroundings I have had up to seven females under observation, mostly on the outside of a web in a head down posture. At no time, either in captivity or in the natural state, in web or on rock face, have I seen this spider with legs outspread. It hunches the legs beside the body in an uneven manner and this, coupled with its colours, light and dark brown, grey and a little white on the palps, gives it the appearance of a bit of earthy debris.

I have never yet seen the male of this spider or the female constructing her web under natural conditions.

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SPATHOGLOTTIS PAULINAE - A QUEENSLAND TERRESTRIAL ORCHID.

by Keith Kennedy, Townsville.

One of the few Queensland ground orchids worthy of cultivation is the purple flowered *Spathoglottis paulinae* of the north-east. Although this particular species grows only in tropical Queensland, the genus occurs in S.E. Asia, both in and out of the tropics, and also in the Pacific area, for, according to Graf, there is a species *S. pacifica* growing in Samoa and Fiji, which has pale lavender-pink flowers, but he does not mention whether he saw it under cultivation or in its natural habitat. At the end of the last century another species with light purple flowers was found on the banks of Stony Creek, Cairns district, near the railway line, and was sent down to the Brisbane herbarium, where it was named *S. soutteriana* by Manson Bailey, after a William Soutter. It would be interesting to know if specimens are still growing there, and whether William Soutter was a visitor or a resident of Cairns.

The furthest south *S. paulinae* has been found is Cardwell, where it was collected by Dallachy and sent to Baron von Mueller at the Melbourne Botanic Gardens, who named it after a lady by the name of Miss Pauline Richmond.

The writer and a few other people in Townsville have flowered it in bush houses, but Cardwell seems to be its natural limit. The original of those I have growing was given to me by the late Stan Short who was an experienced orchidist, but unfortunately he did not tell me where he got his. They are erratic in flowering and under similar conditions some will flower and some will not.

Propagation is by division of the pseudo-bulbs, which should be planted half out of the soil, and at least two attached to each other. Several leaves arise in a bundle from the top of each pseudo-bulb, are about 40 cm in length and are plicate. The flowers are borne on a scape about 42 cm and are arranged 4 to 8 at its end to form an inflorescence of a close raceme. Length of flower is 4 to 6 cm.

According to an American grower, all species grow well in fibre and chopped sphagnum moss in which should be a small portion of loam, some crushed brick and sharp sand, no proportions given. I find for the Queensland species a suitable mixture is 4 parts garden soil (loam), 2 part coarse sand, 1 part humus, and 1 part crushed shell grit. The orchid seems to appreciate the shell grit.

References:

ARNOLD, R. 1952. Spathoglottis Notes. The Orchid Journal. Pasadena, Calif.

BAILEY, F.M. 1902. Queensland Flora, Part V. Brisbane.

GRAF, A.B. 1976. Exotica. Rutherford, New Jersey.

POCOCK, M.R. 1972. Ground Orchids of Australia. Jacaranda Press, Brisbane.

SHUTTLEWORTH, F.S., ZIM, H.S. and DILLON, G.W. 1970. Orchids. Golden Press, New York.

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WILDLIFE AT THE SAUNDERS BEACH DUMP

by Rozanne Glazebrook

Saunders Beach is a small seaside locality thirty-two kilometres north of Townsville. The Saunders Beach dump is in the bush surrounded by eucalypt and paperbark woodland and coastal mangrove swamp. A small creek meets the sea in a narrow estuary 50 metres from the dump.

On 20th March 1978 I drove along the dirt road leading to the dump to observe a huge nest of sticks, high up a tree. The nest belonged to a white breasted sea eagle (Haliaeetus leucogaster). There was no sign of the bird, so I went back to a swamp on the other side of the road to do some bird watching. I saw lots of birds and also found a small nest containing four small speckled eggs.

On the way home I decided to make another quick trip to the dump. As I drove up the road I surprised a lace monitor (Varanus varius). He was on the ground at the dump, but quickly ran up a nearby gum tree when he heard me. He sat about two metres up the tree, but when I got out of the car he climbed higher and swivelled around behind the tree, with just his long claws in view. There were a lot of bird sounds, and as I looked through the binoculars I saw a forest kingfisher (Halcyon macleayii) in the next tree; it was loudly shrieking at the goanna. After a few minutes, the kingfisher flew onto the same tree and perched on a branch above the goanna. The bird continued to glare down at the goanna. The goanna ignored the kingfisher, but continued to look at me.

I walked down the road about 40 metres and continued to watch the scene through the binoculars. They both stayed in the same position all the time I was there.

A flock of noisy friarbirds (Philemon corniculatus) called to each other in a tree nearby; I looked at them through the binoculars, and suddenly I spotted a pair of large claws on another gum tree. Sure enough, as I watched, a large sand goanna (Varanus gouldii) came into view as he edged his way around the tree. He was much larger than the lace monitor and had a circular pattern on his yellowish coloured body. The lace monitor had broad bands of black and yellow along the body, tail and limbs. Nothing more happened, so I went home for about three quarters of an hour.

On return to the dump, I heard a lot of noise coming from the back edge of the tip, tins clanging, and paper rustling. I walked over, and was just in time to see a large goanna ambling slowly away towards the swamp. It appeared to be the same sand goanna I had previously seen up the tree. Unfortunately I couldn't follow him as I was bare footed, and there were lots of tins, broken glass etc. and also the dump was smouldering. I watched the goanna through the binoculars as he disappeared from view.

The lace monitor had gone from his tree. Rainbow birds (Merops ornatus) flew overhead, and one flew past with a white butterfly in his mouth. One solemn dollar bird (Eurystomus orientalis) sat very quietly on a branch and stared at me.

On 6th April I returned to the dump. There were no goannas in sight, but when I looked at the sea eagles' nest I was thrilled to see a magnificent white breasted sea eagle sitting majestically on a branch above the nest.

There was a fire on the dump and the bird was looking towards an area where cans and bottles were exploding. I walked slowly towards the nest, but as I neared it the eagle flew away and circled overhead. I decided to leave when an extra loud explosion sent glass flying in all directions.

I called into the dump again on the 22nd and 23rd of April, but there was no sign of the eagle or the goannas. I was very lucky to see them when I did. I never realized a dump could be so interesting.

OUR FISH PETS

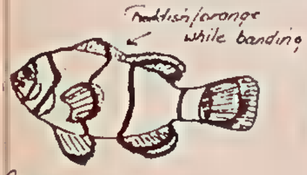
by Barbara Collins.

I was getting impatient because Harry wasn't coming to relieve me of my baby sitting chore so I could do some shelling when the tide turned. Harry and Les had been in the same spot for what seemed like eternity. Hauling Leanne (two years) up on my back, tossing aside the Linckia laevigata (Blue starfish) and beche de mer she had acquired, we set out to see what for ... Les was the proud possessor of a small Amphriprion ocellaris and they had been working to free its host, a lovely green anemone. Shelling was forgotten; in any case the boat was going. Our little fish did well, and took pride of place in the aquarium amongst his marine counterparts, mainly my shells ... until we shifted the aquarium in September and lost the anemone. It was so sad, our little fish looked so lost and vunerable and contented himself in the water outflow. He was apparently not suffering, he still ate well. Two weeks went by and finally a low tide, so it was off to muddy Cooya Beach and hopefully to find an anemone. Luck was on my side, and I dug up a large brown one with purple tips from the dead coral rubble surrounding it. Fortunately it was not connected to anything solid or deep and it was installed without problem in the aquarium. We picked the same spot that the other had liked and without doubt it had to be the most suitable spot. Our new aquisition did not go walkabout, but the fish was not interested either. We watched helplessly. One morning when I went down to feed the fish, there was the A. ocellaris nestling snuggly in the anemone; it had taken him ten days. The fish was loving it as his own and had already started housework. Any debris, sand or food particles he shovelled into his mouth, swam away and dropped it over the edge of the anemone.

At feeding time, the fish would swim out, capture a piece of prawn or fish and swim back to the anemone with it, drop it onto the anemone, tug and pull at the tentacles and worry the anemone until it began to withdraw with a good hold on the food. We regularly watched this procedure at feeding time. We had kept the fish nine months and he had almost doubled in size when we lost him when the baler died in December. A few days later a friend gave us a pair of adult Amphripion akindynos from his aquarium and within half an hour they had staked territorial rights on the anemone. They are not so endearing or particular about their housekeeping and give the anemone only cursory attention, but it is theirs and they defend it agressively.

A pair of sedentary tiny red fish with blue gill markings we call "gobies" (Gobidon histrio) have been with us for ages, probably two years or more now. They are only 25 mm long and we have to remember to catch them if we move or clean the tanks. They always had separate areas of the tank and were seldom seen close to each other. In the newly set up environment after the last shift, one took up residence in a hollow beneath a piece of red coral, the other in the remnants of a beat up old turbo shell that had once housed a hermit crab. One evening I went down to turn out the lights and the tank was a seething mass (so it seemed) of tiny transparent fish about 2 mm long with prominent eye spots. I had noticed a fattening of the goby in the coral, but had just assumed a case of over indulgence in food ... obviously not! "She" was resting nearby on a coral branch, whilst "he" was doing all the nursery work ... no wonder he was thin. "His" shell was apparently the brooding area, and there he was, swimming in, reappearing and swimming off a short distance and spitting a mouthful of babies into the surrounding water ... there were hundreds! In the morning, before even breakfast, the tank was first on the agenda ... not a sign ... not a single solitary one ... the only other fish was the A. ocellaris. The male had vacated his shell and was on a coral branch where he could dart for cover if threatened, the female was in an old clam adjacent to her coral home. Since the baler died, we haven't seen him about, perhaps he too was lost, or maybe parenthood posed too taxing a role!

References: A Field Guide to the Reef Fishes of Tropical Australia and the Indo Pacific Region by R.H. Carcasson.



Amphriprion ocellaris
(Cuvier & Valenciennes)
1830

Amphriprion akindynos
(Allen 1972)

Gobiodon histrio
(Cuvier & Valenciennes)
1837

THE ORIGIN OF GENERIC NAMES OF QUEENSLAND RAINFOREST TREES - PART XI

by JAMES A. BAINES

Note: STCN = Standard Trade Common Name
PCN = Preferred Common Name

Endospermum. Gk endon, within; sperma, seed; named by Bentham because of the placement of the seeds. E. myrmecophilum, STCN Endospermum, or Toywood, has a specific epithet that means ant-lover (cf. Myrmecodia, Ant-house Plant).

Erythrina. Gk erythros, red; alluding to the colour of the flowers. E. vespertilio, STCN Grey Corkwood, or Coral Tree, has leaves shaped like the wings of a bat, hence its specific epithet (Lat for bat, a night-flier--vesper = evening). E. phlebocarpa is listed by Hyland. Fam. Papilionaceae.

Erythroxylum. Gk erythros, red; xylon, wood; from the red colour of the wood of some species. Bailey includes this genus in the spelling Erythroxylon, which was Linnaeus' version of P. Browne's Erythroxylum of 1756. The Qld species, E. ecarinatum, Brown Plum, is one of 250 species in this large genus. Fam. Erythroxylaceae.

Eucalyptus. Gk eu, well; kalyptos, covered; alluding to the cap or lid (operculum) that covers the stamens in the bud. Though the total number of Australian species given by Burbidge, c.600, is now reduced considerably, few species are at home in the rain forests--Hyland lists only 7, of which E. torelliana, named by Mueller after L. de Torelli, is known by the aboriginal name Cadaga. Cadaga seems to be really at home in rain forests of Nth Qld; of course eucalypts are dominant in temperate forests. Fam. Myrtaceae.

Eugenia. Named by L. after Prince Eugene of Savoy (1663-1736), the distinguished soldier who was Marlborough's ally. Born Francois Eugene de Savoie-Carignan, he renounced France when Louis XIV banished his mother, and his military fame was earned as an Austrian general. His name Eugene means well-born in Greek. This enormous genus of 1000 species has had botanists in doubt, but at the present time Australian species tend to be regarded as being in Syzygium and Acmena, although some botanists have retained the name Eugenia; e.g. J.H. Willis for the Lilly-pilly, and Chippendale (in Francis' 3rd edition) for Kuranda Satinash, E. kuranda (also known as Cherry Penda). Fam. Myrtaceae.

Euodia. Smith & Stearn agree with Bailey in deriving this from Gk euodia, 'a sweet scent', but Liddell & Scott's Greek-English Lexicon gives euodia as meaning 'good journey, fair voyage', whereas it gives euodros as meaning 'sweet-smelling'. Despite the fragrance of the leaves, the absence of the letter r in the generic name leads one to surmise that the Forsters gave the name from the 'good appearance' (eu, well or good; odes, from eidos, form). The name was for many years written as Evodia (as given by Bailey in 'Flora of Queensland'). Francis includes 4 species, including E. elleryana, named by Mueller after Robert L.J. Ellery (1827-1908), Victoria's first Government Astronomer, 1853-95, who was president of the Royal Society of Victoria from 1856 to 1884, and E. bonwickii, named by Mueller after James Bonwick (1817-1906), early historian, author of a great variety of educational books--over 60 titles--who made his mark in Vic., Tas., N.S.W. and England. Fam. Rutaceae.

Euplassa. Gk eu, well; plasso, to form or mould. This genus is now restricted to tropical America, but Gevuina bleasdalei, Blush Silky Oak, was at one time placed in it by German botanist Diels. Fam. Proteaceae.

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